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IDENTIFIERS	Pell Grant Program

ABSTRACT

This document is a collection of 12 issues of a monthly report on public policy and programs affecting postsecondary educational opportunity. Each issue contains two or three research articles analyzing postsecondary educational trends. Titles of articles include: "Students with Educational Disabilities"; "Bureau of Labor Statistics Employment Projections: 1994 to 2005"; "Pell Grant Program Participation by State: 1993-1994"; "Freshman-to-Sophomore Persistence by Institutional Level, Control and Academic Selectivity"; "Fiscal Year 1996 State Budget Actions"; "Institutional Graduation Rates by Degree Level, Control and Academic Selectivity"; "Black Males in College or Behind Bars in the United States, 1980 to 1994"; "Earnings of Mid-Career Bachelor's Degree Holders by Major Field of Study in 1993"; "Children, Family Income and College Affordability"; "Public and Private Institutional Charges at Different Levels of Family Income, 1970 to 1994"; "Family Income by Educational Attainment of Householder, 1956 to 1994"; "College Affordability Concerns of College Freshmen Greatest in 30 Years"; "Academic Preparation for College by Gender, Race/Ethnicity and Family Income"; "College Freshmen Numbers Up but Reasons Differ from Past Growth Sources"; "Voting Rates by Educational Attainment"; "Chance for College by Age 19 by State in 1994"; "Federal Income Taxes Paid by College Educated Taxpayers, 1970 to 1994"; "Trends and Patterns in Interstate Migration Of College Freshmen"; "Freshmen Enrolling in College Farther from Home"; "Fiscal Year 1997 State Appropriations for Higher Education: A Year to Cherish"; "High School Grades of College Freshmen: Who Gets What Grades?"; "Pell Grant Program Participation"; "Clinton's Tuition Tax Breaks: Bad Tax Policy, Worse Education Policy"; "Political Engagement of College Students, 1966 to 1995"; "Family Income by Educational Attainment of Householder, 1956 to 1995"; "State Tax Fund Appropriations for Higher Education for Fiscal Year 1997 (and Beyond)"; "Institutional Graduation Rates by Pre-College Academic Records"; "The Story Told by the National Income and Product Accounts"; "Federal, State, Private and Institutional Financial Aid by State, 1994-95." (CH)

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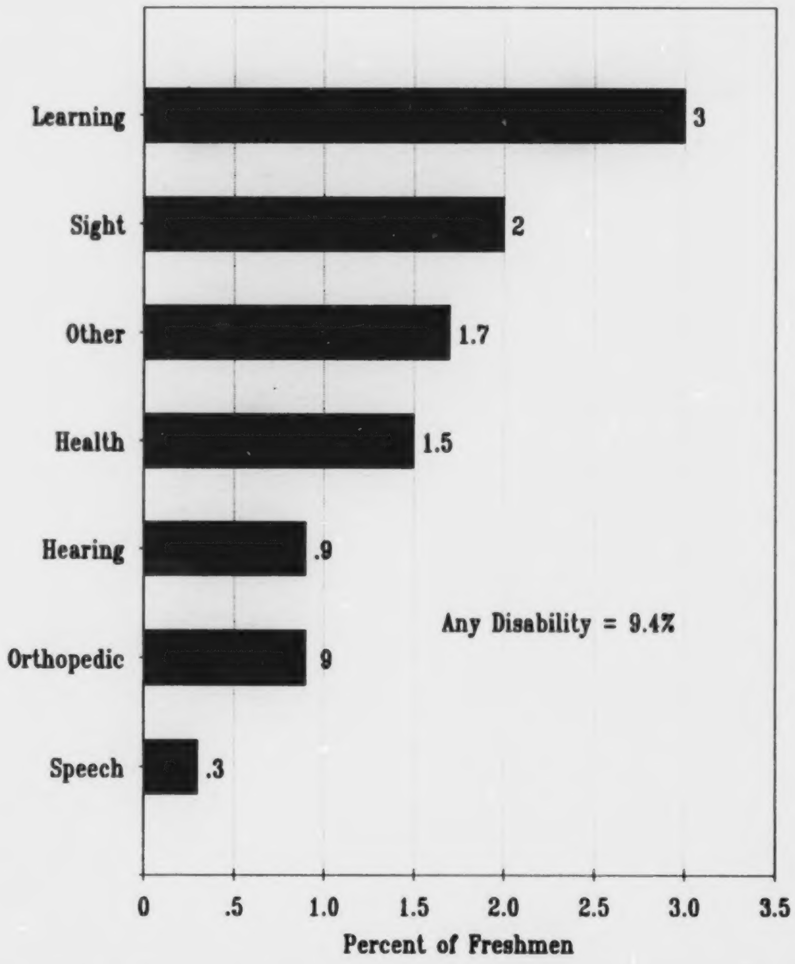
Postsecondary Education
OPPORTUNITY
The Mortenson Research Seminar on Public Policy Analysis of Opportunity for Postsecondary Education
Number 43 **Iowa City, Iowa** **January 1996**

Students with Educational Disabilities

Disabilities Reported by Full-time College Freshmen
1994



Students with disabilities are a growing share of collegiate enrollments.

- *In 1978 2.6 percent of all first-time, full-time college freshmen reported that they had one or more disabilities.*
- *By 1994 the proportion had grown to 9.2 percent.*

Despite these gains, about 10.2 percent of all students ages 6 through 17 were identified as disabled in some fashion, suggesting not all K-12 disabled students make it to college, at least directly from high school.

Here we explore available data describing students with disabilities from K-12 through undergraduate and graduate education. These data describe a student population facing a wide variety of mental, physical and emotional challenges beyond those faced by students without these disabilities. At the collegiate level, these disabilities influence college access, choice, persistence and attainment. Appropriately, these students are also often the focus of special concerns in public policies designed to foster educational opportunity.

This analysis is itself challenged by an apparent softness of definitions of disability and inconsistency of classification of disabled individuals over time. Some definitions have changed over time, and definitions and classifications may vary between states. Beyond these classification issues for government program funding / reimbursement purposes, some disability data used here for college students is self-reported by the student.

Finally, many disability conditions are matters of degree along a continuum from totally impaired to trivial impairment, e.g. from total blindness to wearing glasses to correct minor vision limitations. These conditions invariably produce data classification issues which grow in importance where resources are provided to address the disability.

Despite these issues of definition and classification, disabilities have, can and do curtail opportunities for the education and training required for full participation in American social life and institutions. It is against this backdrop that we undertake this analysis of disabilities and educational opportunity, and the role of public policy and institutional program interventions to assist those with such handicaps.

Disabilities

The classifications of disabilities--formerly handicaps--that are identified in public laws and affect educational opportunity include the following. For education purposes, these disability classifications all have adverse impact on the student's educational performance and are thus addressed in law, programs and appropriations. Here we use definitions used by Iowa in implementing its special education programs at the K-12 level.

- *Specific learning disabilities* are disorders in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that result in imperfect ability to listen, think, speak, read, write, spell or to do math calculations.
- *Speech or language impairments* are communications disorders such as stuttering, impaired articulation, a language impairment, or a voice impairment that adversely affects educational performance.
- *Mental retardation* means subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior that appear during the developmental period and adversely affect educational performance.
- *Serious emotional disturbance* is behaviorally disordered situationally inappropriate behavior which deviates substantially from behavior appropriate to a student's age and interferes with the learning process, interpersonal relationships or personal adjustment of the individual. Included are: deviant disruptive, aggressive or impulsive behaviors; withdrawn or anxious behaviors; and deviant thought processes manifested with unusual communication or behavioral patterns.
- *Multiple disabilities* are concomitant impairments (mental disabilities-blindness, mental disabilities-orthopedicimpairments) which cause severe educational problems that cannot be accommodated in disability-specific special education programs.
- *Hearing impairments* include permanent and fluctuating hearing problems, other than deafness, that impact educational performance.
- *Orthopedic impairments* includes disabilities caused by congenital anomaly (clubfoot, absence of some member), by disease (poliomyelitis, bone tuberculosis), and from other causes (cerebral palsy, amputations, and fractures or burns that cause contractures).
- *Other health impairments* are physical disabilities including limited strength, vitality or alertness due to chronic or acute health problems such as heart condition, tuberculosis, rheumatic fever, nephritis, asthma, sickle cell anemia, hemophilia, epilepsy, lead poisoning, leukemia or diabetes that affect educational performance.
- *Visual impairments* includes both partial sightedness and blindness, and means a handicap that even with correction adversely affects

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Mission Statement
This research letter is founded on two fundamental beliefs. First, sound public social policy requires accurate, current, independent, and focused information on the human condition. Second, education is essential to the development of human potential and resources for both private and public benefit. Therefore, the purpose of this research letter is to inform those who formulate, fund, and administer public policy and programs about the condition of and influences that affect postsecondary education opportunity for all Americans.

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educational performance.

- *Autism* is a developmental disability affecting communication and social interaction that adversely affects individual educational performance.

- *Deaf-blindness* means concomitant hearing and visual impairments which together cause such severe communication and other developmental and educational problems that they cannot be accommodated in special education and related services solely for individuals with either deafness or blindness.

- *Traumatic brain injury* is an acquired head injury caused by an external physical force resulting in total or partial functional disability or psychosocial impairment or both. The term applies to open or closed head injuries resulting in impairments in cognition; language; memory; attention; reasoning; abstract thinking; judgement; problem solving; sensory, perceptual and motor abilities; psychosocial behavior; physical functions; information processing and speech. The term does not include birth injuries.

Data

Enrollment data used here cover students with disabilities in pre-school, K-12 and postsecondary education. We are concerned here primarily with postsecondary education generally and higher education in particular, but most of the available data detail is available for K-12 programs serving students from birth through age 21 due to large federal programs targeted at this level.

The data used here come from several sources. The K-12 education data are collected and reported under the federal special education programs. These programs include the Individuals with Disabilities Act (IDEA) Part B, and the Elementary and Secondary Education Act (ESEA) Chapter 1.

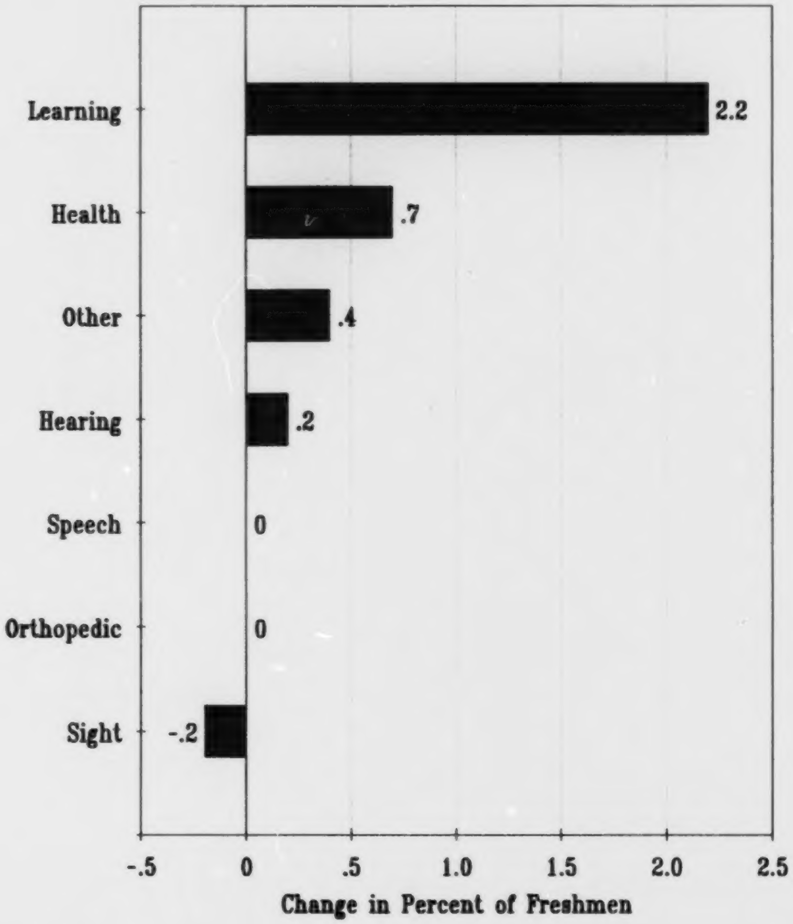
U.S. Department of Education, Office of Special Education and Rehabilitative Services. *Sixteenth Annual Report to Congress on the Implementation of The Individuals with Disabilities Act, 1993.*

The data on students with disabilities in postsecondary education come from two main sources: the annual freshman survey from UCLA with data for the period between 1983 and 1994, and the National Postsecondary Student Aid Study for 1992-93.

Astin, A.W., Korn, W.S., Sax, L.J., and Mahoney, K.M. (1994). *The American Freshman: National Norms for Fall 1994* (and prior years). Los Angeles: Higher Education Research Institute, UCLA.

U.S. Department of Education, National Center for Education Statistics. *The 1992-93 National Postsecondary Student Aid Study.*

Change in
Disabilities Reported by Full-Time College Freshmen
Between 1983 and 1994



Little Kids

Although our main interest in students with disabilities is students in postsecondary education, their education begins in K-12 education (sometimes pre-school). Because the data reported at this level is funding-related and somewhat standardized, it provides a baseline for understanding the available postsecondary data on students with disabilities.

The number of students (birth through 21 years) in K-12 education with disabilities that affected their educational performance was 5.125 million in 1992-93.

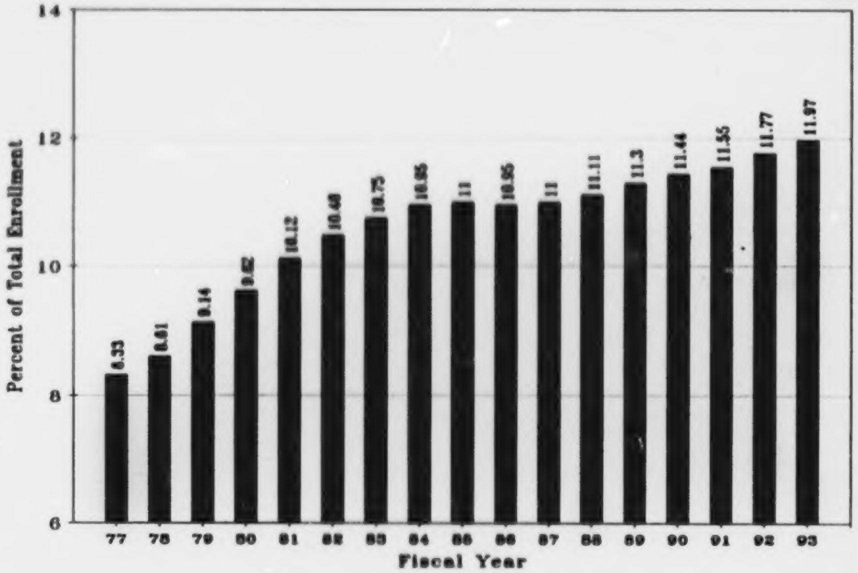
They were distributed across disability classifications as follows:

Specific learning	45.9%
Speech/language	19.4%
Mental retardation	10.1%
Emotional disturbance	7.8%
Multiple disabilities	2.0%
Hearing impairments	1.2%
Orthopedic impairments	1.0%
Other health impairments	1.3%
Visual impairments	0.5%
Autism, other	.4%
Deaf-blindness	LT .05%
Pre-school disabled	10.4%

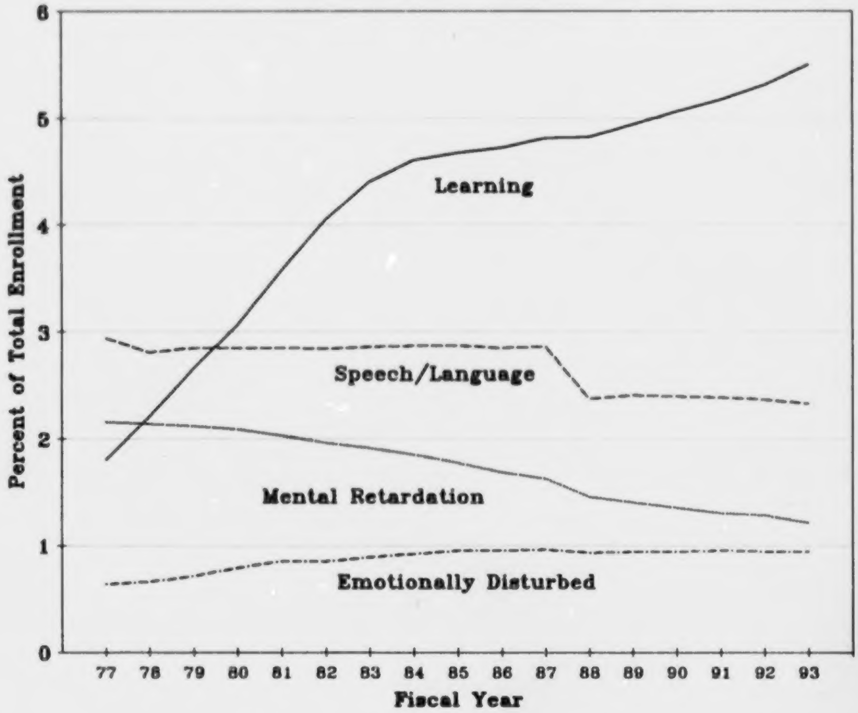
Between FY1976 and FY1993, the proportion of the 0 to 21 population served by federal IDEA and ESEA programs has grown from 8.33 to 11.97 percent. This growth has been gradual and persistent with the most recent being the highest on record, as shown to the right.

Moreover, the distribution of K-12 students with disabilities has changed significantly over the last 17 years. The proportion classified with specific learning disabilities has grown from 21.6 percent in FY1977 to 45.9 percent by FY1993. This gain has been offset by large reductions in students classified with speech or language impairments (from 35.3 to 19.4 percent) and mental retardation

Disabled Children 0 to 21 Served in Federally Supported Programs as a Percent of Total K-12 Public Enrollment FY1977 to FY1993



Incidence of Educational Disabilities Among Children 0 to 2 Served in Federally Supported Programs FY1977 to FY1993



(from 26.0 to 10.1 percent).

We are told by special education professionals that these changes reflect parental preferences in classification of their disabled children. For example, parents would prefer to have their children identified with specific learning disabilities rather than mental retardation. Thus the growth in children served as learning disabled reflects more a fad in classification than it does true growth in specific learning disabilities or true decline in mental retardation. This reclassification may have implications for the educability of such re-classified students in postsecondary education where IQ and its correlates (SAT and ACT) has such a powerful influence on college access, choice, persistence and degree attainment.

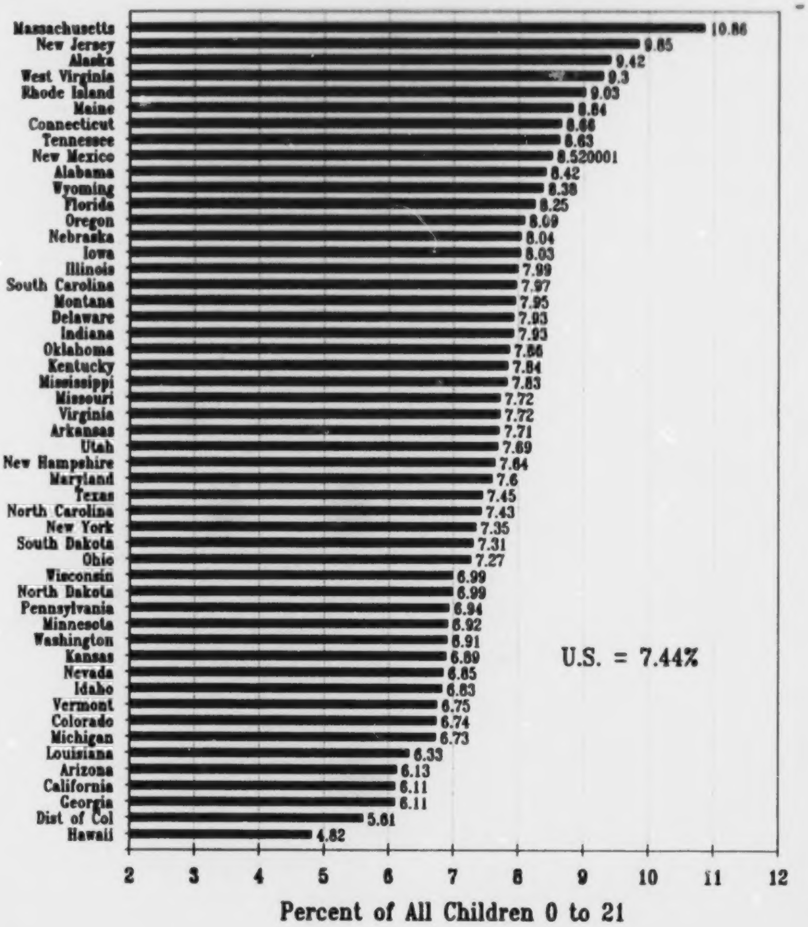
We also note the large differences between states in the rate at which children between birth and 21 years are classified as disabled and are served through federal programs for students with educational disabilities. In 1992-93 the proportion of children identified and served as educationally disabled ranged from 4.8 percent in Hawaii to 10.9 percent in Massachusetts. These differences may reflect differences in state outreach efforts to students with educational disabilities. But they may also reflect differences in state efforts to qualify for federal funds under IDEA and ESEA.

Exiting K-12 Education

Disabled students may receive educational services through about age 21 under federal programs. In 1991-92, when they left the K-12 system, there status was as follows:

Graduated with diploma	43.9%
Graduated through certificate	13.4%
Reached maximum age	1.9%
Dropped out	22.4%
Other reasons for exit	18.3%

Children from Birth through 21 Years
Served under IDEA Part B and ESEA Chapter 1
1992-93



High school graduation with diploma rates varied widely by type of disability. To some extent these rates measure severity of the educational disability of the students who have them.

Traumatic brain injury	64.1%
Visual impairments	60.7%
Hearing impairments	55.8%
Deaf-blindness	50.3%
Orthopedic impairments	50.2%
Specific learning disabilities	49.7%
Other health impairments	48.6%
Speech/language impairments	43.9%
Multiple disabilities	38.7%
Mental retardation	36.1%
Serious emotional disturbance	28.1%

Similarly, dropout rates were highest for those with serious emotional disturbance (35.0%), specific learning disabilities (21.3%), speech or language impairments (20.1%) and mental retardation (19.6%).

A one-year follow-up study of special education students who completed, reached maximum age or dropped out of high school during the 1985-86

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school year found the following employment rates by type of disability in 1987:

Learning disabled	57.2%
Speech impaired	50.0%
Hard of hearing	45.5%
Emotionally disturbed	40.0%
Deaf	38.3%
Mentally retarded	31.4%
Other health impaired	28.8%
Visually impaired	24.3%
Orthopedically impaired	13.9%
Deaf-blind	9.5%
Multiple disabilities	5.7%

This study also found full-time employment rates highest among those who were learning disabled, speech impaired, hard of hearing and deaf. Those earning highest pay were speech impaired, hard of hearing and learning disabled. Sixty-nine percent were living with their parents, and 17 percent were living independently one year after leaving high school.

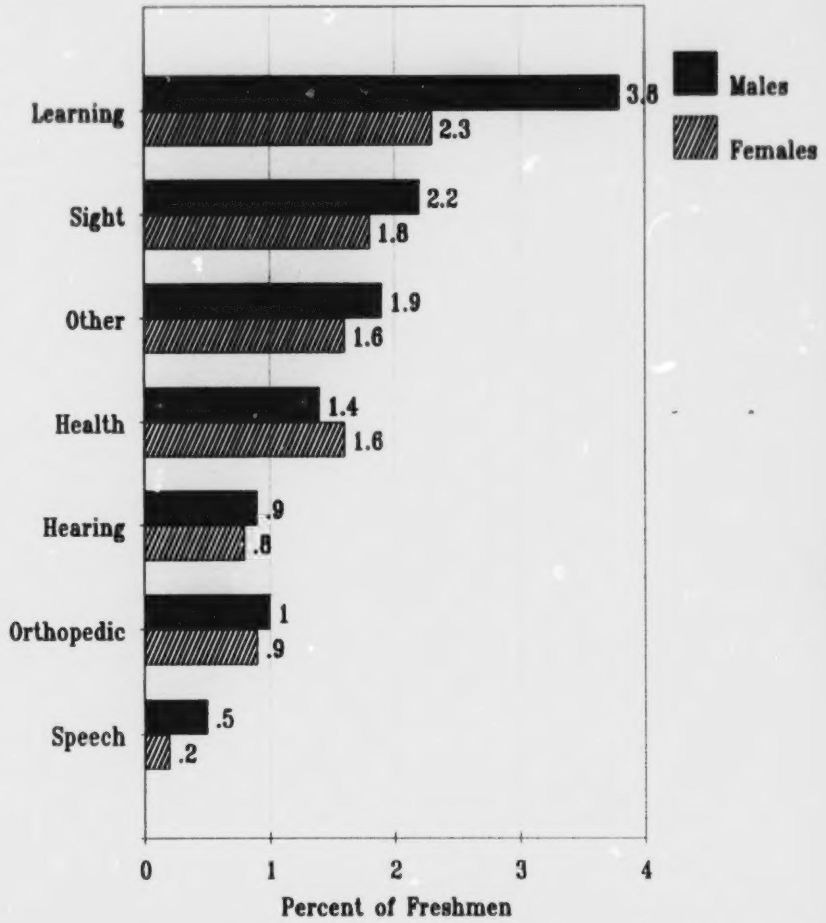
Big Kids

The description of students with educational disabilities in K-12 carries over to students in postsecondary education in some useful ways.

As shown in the chart on page 1, the most frequently self-reported disability of first-time, full-time college freshmen is learning disability. In 1994 3.0 percent reported that they were learning disabled, compared to 5.5 percent of children 0 to 21 years.

Between 1983 and 1994, the share of college freshmen reporting educational disabilities increased primarily among those with learning impairments as shown in the chart on page 3. This growth mirrors the growth in K-12 students with specific learning disabilities since the mid-1970s.

Disabilities Reported by Full-time College Freshmen
by Gender
1994



We are stuck, however, by differences in the distribution of educational disabilities among K-12 students and college freshmen. College students are less likely than K-12 students to report learning and speech disabilities, but more likely to report sight, other, health, orthopedic and hearing disabilities. Apparently, not all K-12 students with disabilities receive special education services under the several federal programs, but are instead integrated into regular classroom situations.

Males are considerably more likely than females to report educational disabilities. For each type of disability except other, more male college freshmen reported that they were disabled than did females. The largest difference was in learning disabilities where males were nearly twice as likely as females to report learning disabilities.

College freshmen with learning disabilities are not distributed uniformly across all types of higher educational institutions. They were most likely to be enrolled at 2-year colleges--particularly private 2-year colleges in 1994. They were least likely to be enrolled in universities and black colleges, public or private.

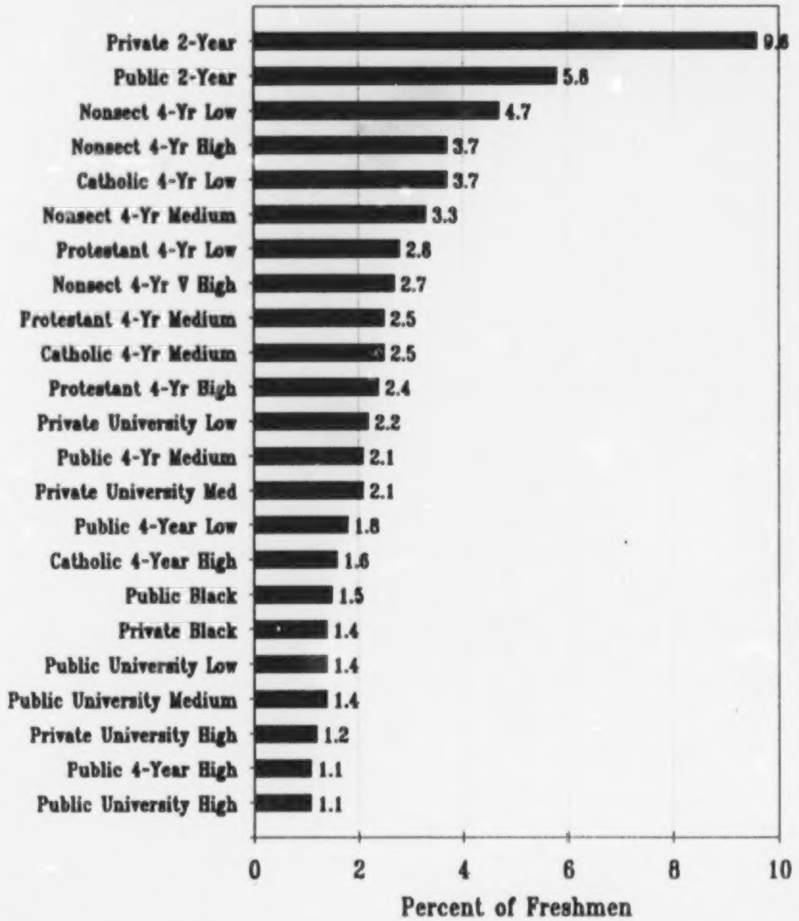
The National Postsecondary Student Aid Study (NPSAS) provides additional descriptive information on undergraduate and graduate/first professional students for 1992-93. Educational disabilities included specific learning disabilities, visual handicaps, hard of hearing, deafness, speech disability, orthopedic handicap and health impairments.

- Among all postsecondary students 6.3 percent of the undergraduates and 4.0 percent of graduate/first professional were disabled.

Among undergraduates:

- 53 percent of the disabled students were male and 47 were female, although 44.3 percent of nondisabled undergraduates were male and 55.8 percent were female.
- Whites and American Indians were more likely to report disabilities, while blacks and Hispanics were less likely to report disabilities.
- Older students--those 30 and beyond--were far more likely to report disabilities than younger students--those 23 years or less.
- Military veterans were far more likely to report disabilities than were non-veterans.
- Independent students, both with and without dependents of their own, were more likely to report disabilities than were dependents.
- Students with disabilities were more likely than the nondisabled to live off-campus or with relatives. Students without disabilities were more likely to live in school-owned housing and with parents.
- Disabled students were more likely to be enrolled part-time than were nondisabled students.
- Disabled undergraduate enrollments were higher than the average for all enrollments in the fields of computer sciences, vocational programs, other professional/technical and humanities. They were lower than the average in the fields of mathematics, life sciences, education, health and social science. Their representation in physical sciences, engineering and business most closely reflected their representation in total undergraduate enrollments.

Learning Disabilities Reported by College Freshmen
by Institutional Type, Control and Academic Selectivity
1994



Disability and Educational Opportunity

Students with educational disabilities clearly lack full postsecondary educational opportunity. They represent 10.2 percent of the K-12 population between 6 and 17 years, 9.2 percent of the college freshman population, 6.3 percent of all undergraduates in postsecondary education, and 4.0 percent of all graduate/first professional enrollments. Nevertheless, the UCLA Freshman Survey offers evidence that their access to college has increased sharply, from 2.6 percent of all freshmen in 1978 to 9.2 percent by the fall of 1994. This growth is concentrated among freshmen reporting learning disabilities. Unfortunately our data are far too limited to understand which kinds of disabilities pose the largest barriers to postsecondary education opportunity.

Bureau of Labor Statistics Employment Projections 1994 to 2005

Between 1994 and 2005 the U.S. work force is expected to increase by 16 million, from 131 million to 147 million, according to employment projections recently released by the Bureau of Labor Statistics.

- *39.3 million workers will enter the labor force.*
- *23.3 million entrants will replace workers who will leave the labor force due to death, retirement or other reasons.*
- *16.0 million will be additions to the labor force reflecting growth.*

The areas of greatest growth in the labor force will be those--and only those--requiring an associate degree or more in postsecondary education. Those areas--all of them--not requiring higher education will grow at less than the projected rate of growth in employment between 1994 and 2005.

These data were released in December by the Bureau of Labor Statistics.

Bureau of Labor Statistics. (December 1995). *News.* USDL:95-485. Washington, DC: U.S. Department of Labor.

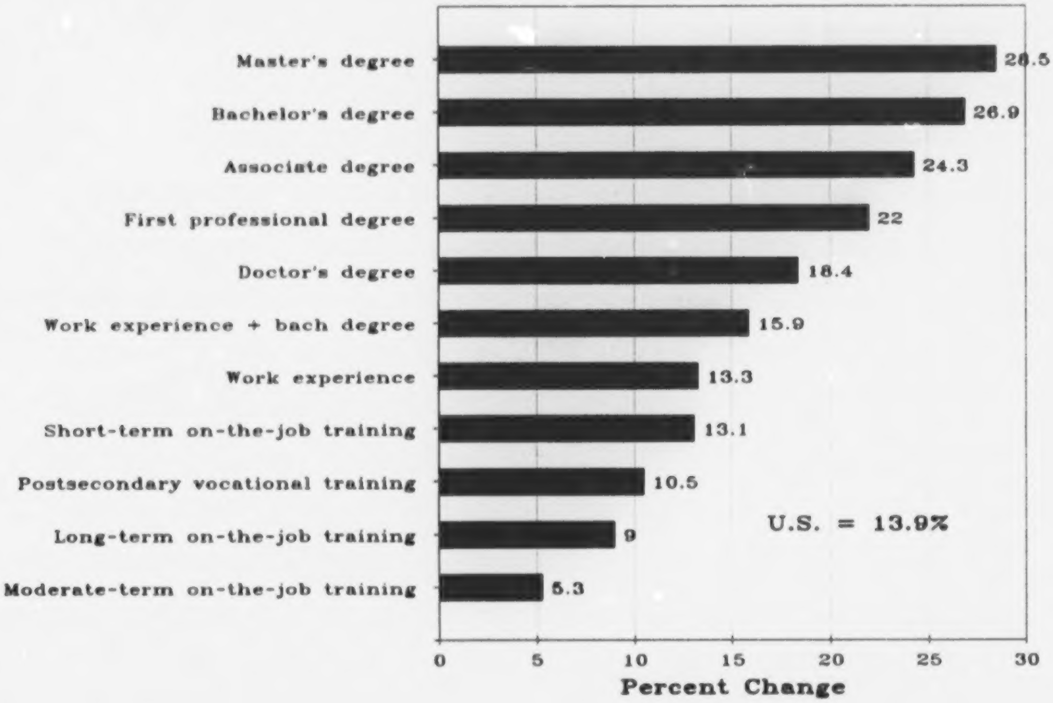
These projections reflect changes in the educational requirements of the American labor force. Employment will grow at faster than average rates in occupations and industries requiring higher education, and will grow at below average rates in occupations and industries that do not require workers with college degrees.

The BLS projections show smaller growth in total employment over the next eleven years than occurred in the previous eleven years. While the labor force increased by 24.6 million between 1983 and 1994, it is projected to increase by 17.7 million between 1994 and 2005.

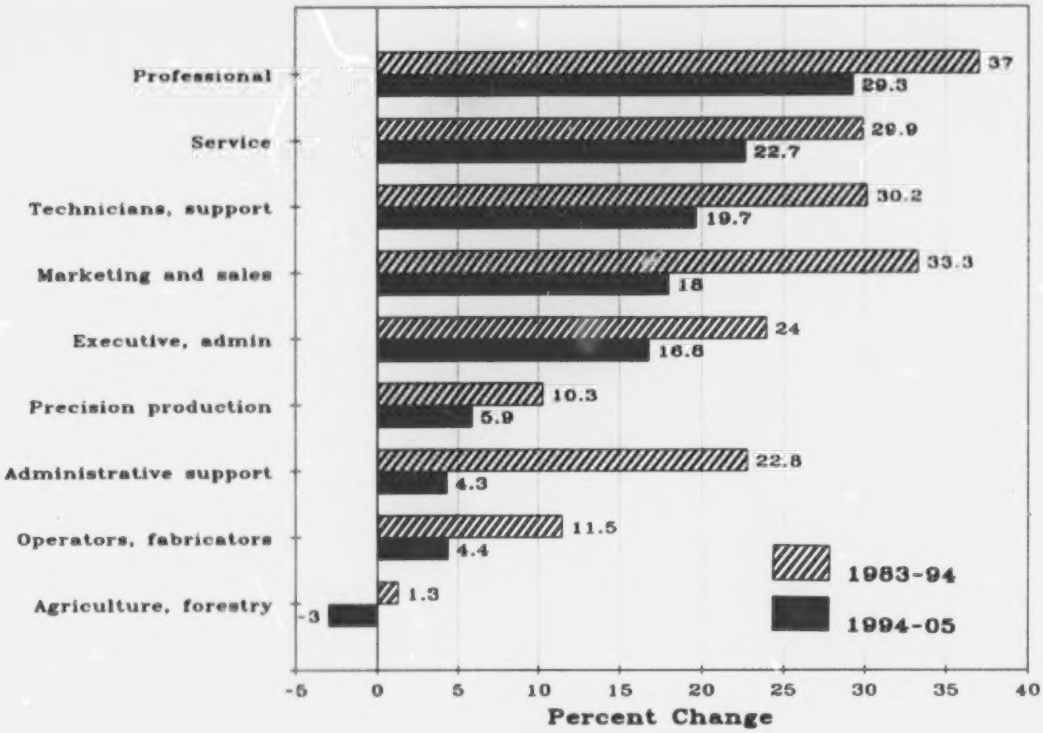
The ten industries with the largest job growth between 1994 and 2005 are:

Health services	84.1%
Residential care	82.7%
Computer and data processing	69.5%
Individual/misc social services	68.8%
Misc business services	68.4%

Projected Change in Employment by Education and Training Category 1994 to 2005



Change in Employment by Major Occupation Groups 1983 to 1994 and 1994 to 2005



Child day care services	59.4%
Personnel supply services	58.1%
Services to buildings	58.0%
Misc equipment rental/leasing	50.8%
Management/public relations	46.4%

The ten fastest growing occupations between 1994 and 2005 are projected by BLS to be:

Personal/home care aides	119%
Home health aides	102%
Systems analysts	92%
Computer engineers	90%
Physical/corrective therapy aides	83%
Electronic pagination system	83%
Occupational therapy aides	82%
Physical therapists	80%
Residential counselors	76%
Human services workers	75%

Of the 16.0 million workers to be added to the labor force between 1994 and 2005:

- 62 percent will be women and 38 percent will be men.
- Those 16 to 24 years will add 15 percent to the labor force, those 25 to 54 will contribute 44 percent of the increase, and those 55 and older will add 41 percent. The labor force between 25 and 34 will decline by nearly 4 million, reflecting the decrease in births in the late 1960s and early 1970s.
- The share of the labor force held by non-Hispanic whites will drop from 77 to 74 percent between 1994 and 2005. This drop occurs among white males only--the share held by white women remains constant.
- The non-Hispanic black share of the labor force remains constant at about 11 percent.
- The Hispanic share of the labor force increases from 9 to 11 percent between 1994 and 2005. Both male and female Hispanics add 1 percent each to their shares of the 2005 labor force.
- The Asian and other population share of the labor force increases from 3 to 4 percent of the total.

In 1994 23.9 percent of the labor force had higher education ranging from the associate degree through the doctor's degree. By 2005 the Bureau of Labor Statistics projects that this will rise to 25.8 percent of the labor force.

More detail on these projections are contained in five articles published in the November 1995 issue of the *Monthly Labor Review* published by the Bureau of Labor Statistics. Data on education and training will be published in "Employment Outlook: 1994-2005, Job Quality and Other Aspects of Projected Employment Growth," BLS Bulletin 2472.

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The mother of all . . . . . . student financial aid grant programs

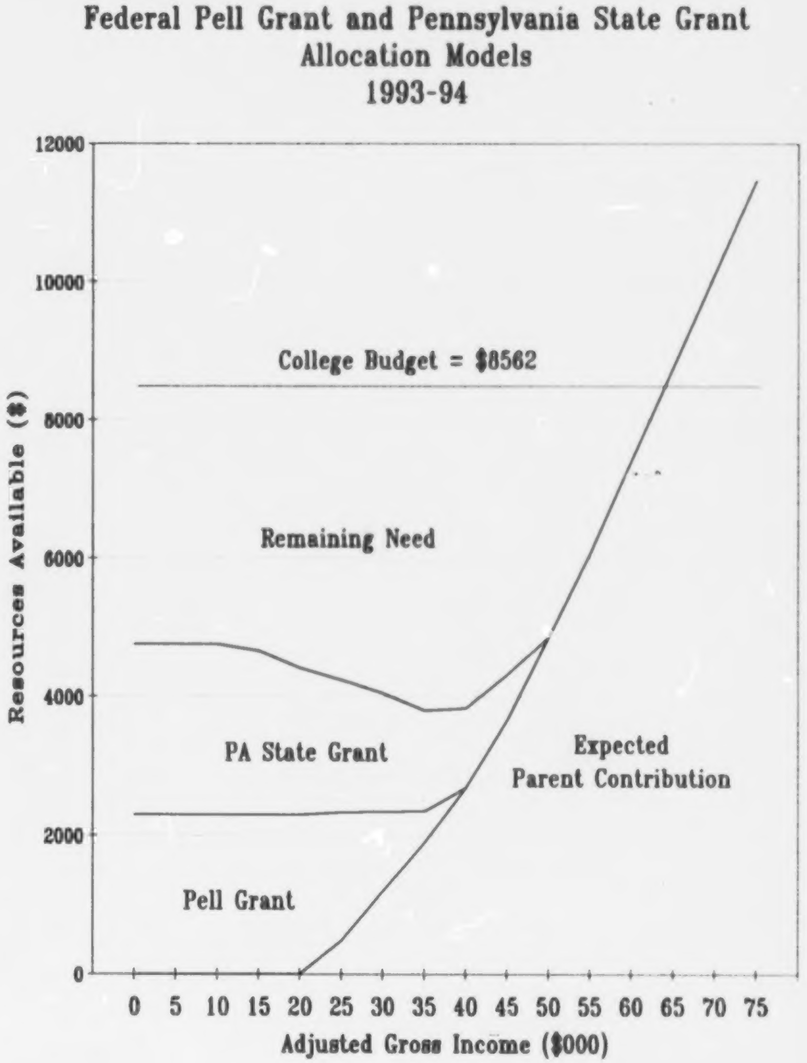
Pell Grant Program Participation by State
1993-1994

The federal Pell Grant program is the largest financial aid grant program for needy undergraduate students.

- *Between its first year of operation in 1973-74 through 1993-94, 53.6 million Pell Grants were awarded with a total value of $63.8 billion.*
- *In 1993-94 alone, 3.75 million undergraduates received $5.65 billion in Pell Grants, averaging $1506 each.*

Pell Grants are usually packaged in combination with financial aid in other forms and from a variety of sources to help students and their families meet college attendance costs. In such packages Pell Grants, for those who are eligible to receive them, form the foundation of the financial aid package. Remaining need may then be met by state grants, others grants, scholarships, educational loans and earnings from employment to enable the undergraduate student to pursue his or her planned program of postsecondary study.

In this analysis we update previous reports presented in OPPORTUNITY that illustrate the role played by federal Pell Grants in helping students from low income family backgrounds to finance their postsecondary educations. Pell Grants may be used at public and private colleges and universities and in for-profit schools. In particular, we are interested in the foundation role of federal Pell Grants as they accompany state grants and thus much of this presentation relates to the Pell Grant program in the states.



Federal Pell Grant and Pennsylvania State Grant Allocation Models 1993-94

Data

Mainly our data come from the federal contractor's report on the 1993-94 Pell Grant program:

National Computer Systems. (1995). *1993-94 Title IV/Federal Pell Grant Program End-of-Year Report.* Submitted to U.S. Department of Education.

This report contains extensive state data on the applicants for and recipients of federal Pell Grants.

In addition we have used data from The College Board, National Association of State Scholarship and Grant Programs, New York Higher Education Services Corporation and the National Center for Education Statistics as noted in this report.

The Pell Grant Foundation

The formula for determining financial need is:

	College attendance costs
Less	Expected family contribution
Equals	Financial need

Financial need is then met through a combination of grants, loans and earnings from employment. Pell Grants, for those who are eligible to receive them, typically provide the foundation of the financial aid package for students from low income family backgrounds.

For example, as shown in the figure to the left, in 1993-94 a student attending an average cost public university faced a college budget of $8562 according to the annual survey of college attendance costs conducted by The College Board. This budget included tuition and fees, books and supplies, and an allowance for food, housing, transportation, personal and medical care, etc., while attending college full-time for nine months.

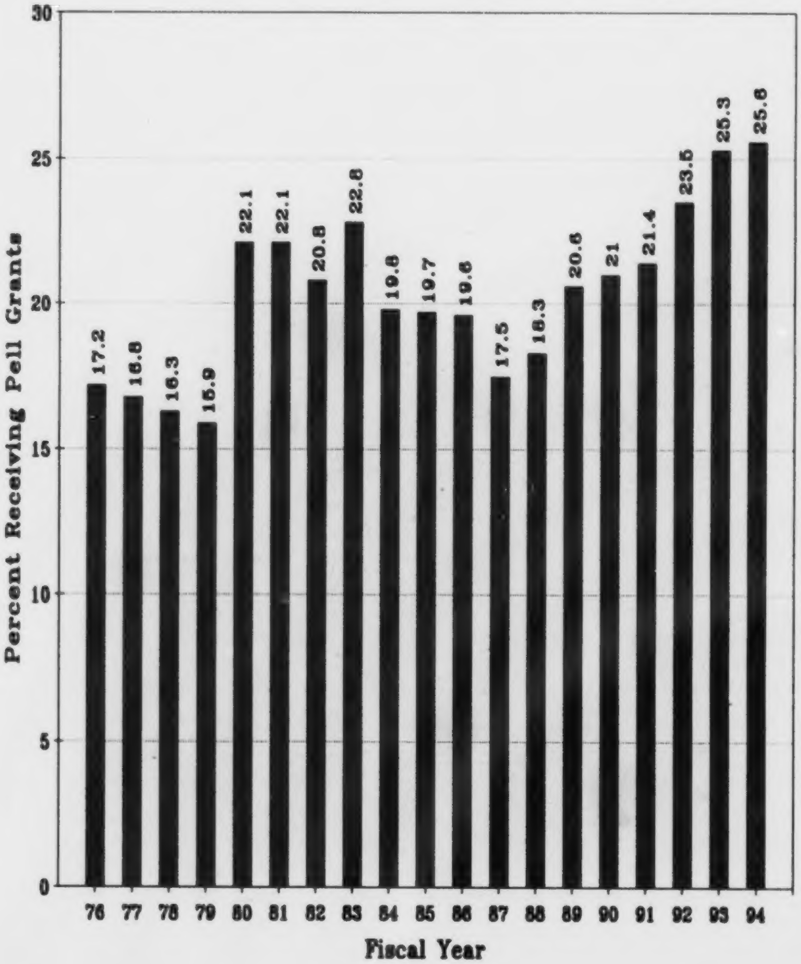
The expected family contribution from need analysis is then deducted from these college attendance costs. Each aid applicant's parental income and assets were assessed to determine if and how much was available to meet the college budget of the student.

- At low income levels, below about $20,000 per year, the parental contribution was usually zero, and thus students from such families demonstrated need for $8562 in financial aid.
- Above about $20,000 in family income parental resources were sufficient to contribute something toward the cost of attending college. These families still needed financial aid to complete the financing of college attendance costs.
- Above about $65,000 the expected parental contribution from need analysis was greater than the $8562 college budget faced by the student. These students were not financially needy and not eligible for need-based student financial aid.

The Pell Grant is normally the first source of financial aid to meet financial need. Up to about $20,000 per year dependent students qualified for the maximum Pell Grant award, which was $2300, this leaving $6262 in remaining financial need. In **Pennsylvania** the State Grant then added up to $2500 to the Pell Grant for those from lowest income family backgrounds. This still left $3762 in remaining financial need for Pennsylvania undergraduates to finance from their own resources, institutionally awarded aid, or self-help in the forms of loans or earnings from employment.

Note that in the Pennsylvania model, many students from middle income families did not receive either federal Pell Grants nor Pennsylvania State Grants, but were still financially

Higher Education Undergraduates Receiving Pell Grants
1975-76 to 1993-94



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Pell Grant Program Summary Statistics

FFY1974 to FFY1994

Award Year	Applications			Elgbl Apps	Recipients				Formula	Maximum Grant		Min Grant	Cost Cap	Funding Level
	Official(K)	Valid(K)	Eligible(K)		Numbr(K)	Expnd(M)	Mean	Indep		Authrizd	Funded			
73-74	512.9	482.3	268.4	F	176.0	$47.6	$270	13.3%	Pell	$1,400	$452	$50	50%	StepRed
74-75	1,304.9	1,114.1	681.6	FS	567.0	358.4	628	21.9	Pell	1,400	1,050	50	50	StepRed
75-76	2,339.3	2,178.7	1,455.2	FSJ	1,217.0	926.0	761	29.8	Pell	1,400	1,400	200	50	Full
76-77	3,590.4	3,408.7	2,258.0	Ug	1,944.0	1,475.4	759	38.3	Pell	1,400	1,400	200	50	Full
77-78	3,844.0	3,621.6	2,390.3	Ug	2,011.0	1,524.3	758	38.5	Pell	1,800	1,400	200	50	Full
78-79	3,885.4	3,401.4	2,228.6	Ug	1,893.0	1,540.9	814	36.7	Pell	1,800	1,600	50	50	StepRed
79-80	4,186.7	3,868.4	3,029.7	Ug	2,537.9	2,357.2	929	33.8	Pell	1,800	1,800	200	50	Full
80-81	4,825.4	4,475.8	3,330.5	Ug	2,707.9	2,387.1	882	40.6	Pell	1,800	1,750	150	50	$50Flat
81-82	4,945.8	4,614.6	3,398.2	Ug	2,709.1	2,300.0	849	41.9	Pell	1,900	1,670	120	50	$80Flat
82-83	5,118.6	4,709.2	3,341.4	Ug	2,522.7	2,420.5	959	45.9	Pell	2,100	1,800	50	50	StepRed
83-84	5,453.5	4,955.8	3,541.2	Ug	2,758.9	2,797.1	1,014	47.5	Pell	2,300	1,800	200	50	Full
84-85	5,514.0	4,981.4	3,558.4	Ug	2,747.1	3,053.0	1,111	48.6	Pell	2,500	1,900	200	50	Full
85-86	5,627.1	5,205.5	3,710.9	Ug	2,813.5	3,597.4	1,279	50.4	Pell	2,600	2,100	200	60	Full
86-87	6,028.3	5,535.7	3,769.6	Ug	2,659.5	3,460.0	1,301	53.9	Pell	2,600	2,100	100	60	LnrRed
87-88	6,297.6	5,714.2	3,812.8	Ug	2,881.5	3,754.3	1,303	57.5	Pell	2,300	2,100	200	60	Full
88-89	6,519.3	5,913.2	4,199.3	Ug	3,198.3	4,475.7	1,399	57.9	Pell	2,500	2,200	200	60	Full
89-90	6,778.0	6,165.3	4,347.7	Ug	3,322.2	4,777.8	1,438	59.0	Pell	2,700	2,300	200	60	Full
90-91	7,138.9	6,455.1	4,508.0	Ug	3,404.8	4,935.2	1,449	61.1	Pell	2,900	2,300	100	60	LnrRed
91-92	7,775.2	6,983.6	4,941.0	Ug	3,786.2	5,792.7	1,530	61.5	Pell	3,100	2,400	200	60	Full
92-93	8,248.1	7,365.2	5,243.1	Ug	4,002.0	6,175.9	1,543	62.1	Pell	3,100	2,400	200	60	Full
93-94	8,770.4	8,518.7	5,382.7	Ug	3,755.7	5,654.5	1,506	59.2	FM	3,700	2,300	400	100	Full
94-95				Ug					FM	3,900	2,300	400	100	Full
95-96				Ug						4,100				
96-97										4,300				
97-98										4,500				

Notes and sources:
Most of these data are updated and published annually in the Department of Education's *Pell Grant End of Year Report*. In addition, data on percent of Pell recipients who are independent and the Percent of Cost of Attendance Cap were published by The College Board in *Trends in Student Aid: 1985 to 1995*.

needy. However, depending of the expected parental contribution from need analysis, they probably had less remaining financial need than did students from lower levels of family income.

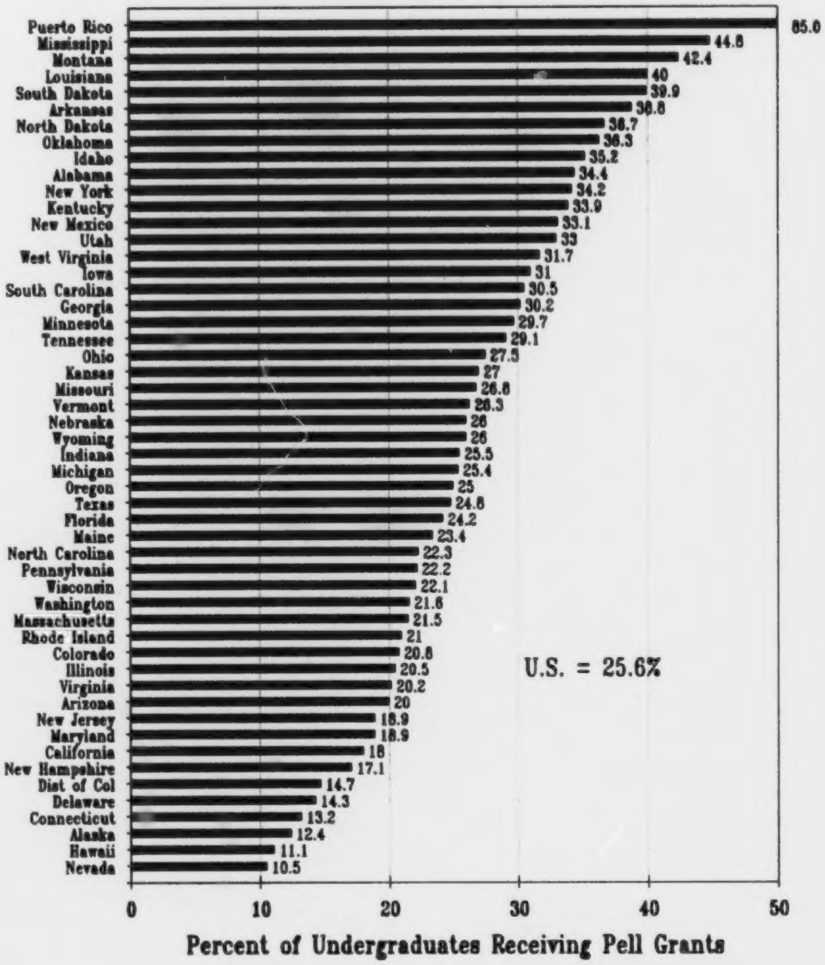
Program Participation

Nearly all applicants for financial aid are evaluated for Pell eligibility and are awarded Pell Grants if they are eligible. Because this is a federal determination, all students throughout the country plus Puerto Rico and trust territories are evaluated under identical criteria.

The proportion of undergraduates in *higher education colleges and universities* that received Pell Grants each year between 1975-76 and 1993-94 is shown in the chart on page 11. The large increase in 1979-80 reflects liberalization of Pell Grant eligibility enacted in the Middle Income Student Assistance Act in 1978. In 1993-94 a larger proportion of college undergraduates received Pell Grants than in any prior year of the program.

Differences in Pell Grant program participation between states reflect differences between the states and not differences in federal treatment of aid applicants from different parts of the United States.

Pell Grant Program Participation by State
1993-94



The chart on this page shows the proportion of undergraduate *college and university* students that received federal Pell Grants during the 1993-94 award year.

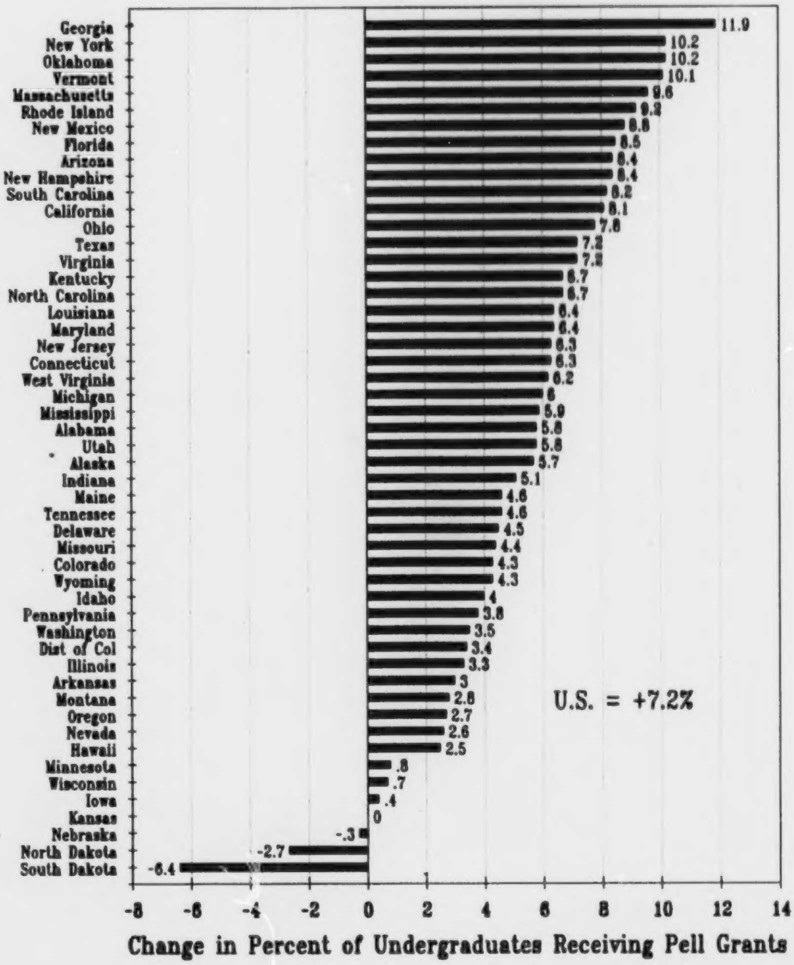
- For the 50 states plus Washington DC and Puerto Rico, 25.6 percent of the undergraduates in colleges and universities received Pell Grants.
- The range among the states was from 10.5 percent in Nevada to 44.8 percent in Mississippi.
- In Puerto Rico fully 85 percent of all undergraduate students in colleges and universities there received Pell Grants in 1993-94.

This chart does not include the substantial numbers of students enrolled in for-profit schools that also received Pell Grants only because we lack state-by-state enrollment data for these organizations. Data on Pell recipients by state and institutional control will be presented later in this analysis.

Between 1987-88 and 1993-94 the proportion of college undergraduates receiving Pell Grants increased by 7.2 percent. However, this was not reflected in all states. In **Georgia**, for example, the proportion of undergraduates receiving Pell Grants *increased* by 11.9 percent, while in **South Dakota** the proportion *decreased* by 6.4 percent. The states with declines or the smallest increases during the six year period were all upper midwestern states.

Institutional Control

Pell Grants may be used by undergraduates who have not received a bachelor's degree at public, private or for-profit postsecondary institutions.



Change in Pell Grant Program Participation by State, 1987-88 to 1993-94

Across all types of institutions, 66.9 percent of all Pell Grants were used by students in public institutions, 18.0 percent were used by students in private institutions, and 15.0 percent were used by students enrolled in proprietary institutions.

The distribution of dollars was similar: 65.9 percent went to students in public institutions, 18.8 percent went to students in private institutions, and 15.2 percent went to students at the proprietaries.

Influences on State Participation

The Pell Grant program is clearly targeted to serve students from the lowest income family backgrounds. The same formulas and eligibility criteria are applied to all applicants for Pell Grants, regardless of their state or origin. Thus, differences in Pell Grant program participation rates between states are attributable to differences between states and not differences in the administration of the Pell Grant program across states.

We have sought to identify state characteristics that would help explain the very large differences in Pell Grant program participation rates between the states in 1993-94. These characteristics should be related to criteria of the Pell Grant program for making awards, such as family resources available to pay for college.

We have chosen three here:

- Median household income
- Per capita personal income
- Poverty rate

Median household income for 1993 is reported by the Census Bureau. In our study the correlation of each state's Pell Grant program participation rate with median household income was -.78. That is, as median household income increased, the proportion of undergraduate college students receiving Pell Grants decreased.

Per capita personal income for 1993 correlated with Pell Grant program participation rates at -.77. Again, increasing per capita personal income lead to a decline in the proportion of undergraduate college students receiving Pell Grants.

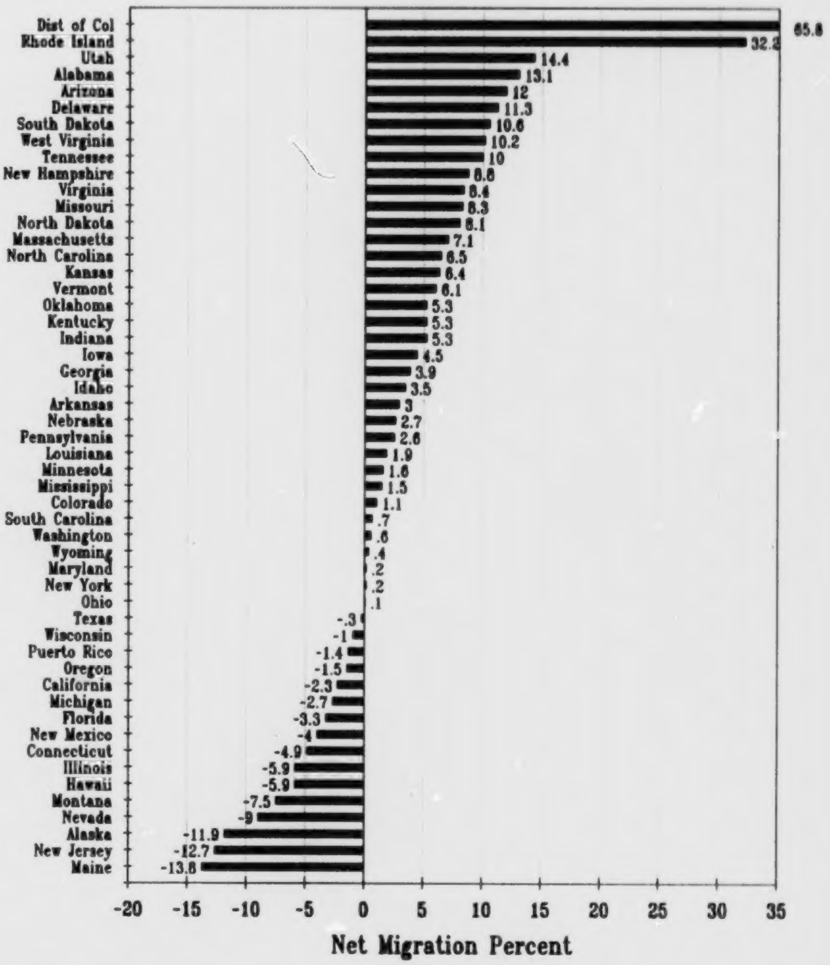
The state poverty rate correlated positively with the Pell Grant program participation rate. For 1993-94 it was +.64. Thus, the larger the proportion of a state's population living in poverty the larger one could expect the proportion of undergraduates receiving Pell Grants to be.

Each of these measures is highly correlated with the Pell Grant program participation rate for 1993-94, and in the expected direction. We have plotted the Pell participation rate as a function of median family income in the chart on the following page. Most state data points fall fairly close to the linear regression line plotted through the data points. The notable outliers such as Utah have fairly clear explanations--family size.

Quite likely a more complete statistical model would explain a larger share of the variation across states in Pell Grant program participation rates. At the minimum, the following are influences missing from our model:

- A control for *household size* in addition to median household income.
- A control for *economic conditions*, e.g. unemployment rate, in each state. As is frequently observed in time-series analyses, an increase in the unemployment rate produces increased community college enrollments where low family income students are concentrated.
- A control for *outreach efforts* in states where TRIO and similar state programming exists. Outreach searches out and prepares students from low income family backgrounds for college. States are known to vary widely in their efforts to reach these Pell-eligible students.

Net Interstate Migration of Pell Grant Recipients
1993-94



Interstate Migration

Unlike most state grant and all state institutional financial support, Pell Grant recipients may take their Pell Grants across state boundaries and enroll in public, private or proprietary institutions elsewhere. Many do. And their net migration provides interesting insight into the apparent attractiveness of educational opportunities in a state for students from low income family backgrounds who are residents of that state.

The federal Pell Grant recipient data are tabulated and reported on two geographic bases: the state of residence of the Pell Grant recipient, and the state where the recipient enrolls. For each state, the sum of the differences between the two is the net migration of Pell Grant recipients for that state. If there are more Pell Grant recipients enrolled in institutions in a state then there are residents of the state who receive Pell Grants then the state is a net importer of students from low income family backgrounds. If there are more residents of a state receiving Pell Grants than are enrolled in institutions in that state, then the state is a net exporter of students with Pell Grants from low income family backgrounds.

The chart on the following page calculates *net migration rates* for each state. These are the numbers of net Pell migrants divided by the number of Pell Grant recipients who are residents of that state.

Pell Grant recipient net migration rates for 1993-94 were as high as +65.8 percent for the **District of Columbia**. Excluding this "city-state," **Rhode Island's** net migration rate of 32.2 percent was more than twice that of third place **Utah** at 14.4 percent. Because several very large states were net exporters of Pell Grant recipients, 36 of the 52 jurisdictions attracted more Pell Grant recipients than they exported.

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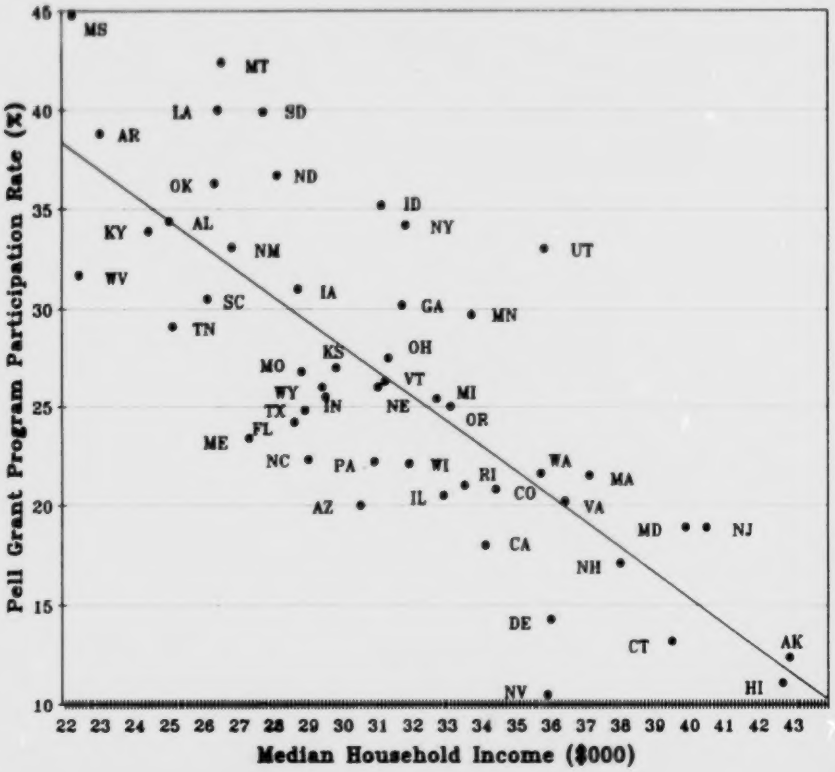
The largest net exporters of Pell Grant recipients are states known generally to export more of their students to other states than they import, notably New Jersey and Illinois.

Conclusions

States vary widely in their participation in the federal Pell Grant program. About a quarter of all undergraduates in colleges and universities receive Pell Grants to help finance their higher educations. The range is from about 10 percent of the students in Nevada institutions, to 85 percent of those enrolled in colleges and universities in Puerto Rico.

Because the federal Pell Grant operates under the same rules in all locations, the above variations are attributable to differences between states. We have shown that the proportion of undergraduates receiving Pell Grants in each state is strongly correlated with median family income, per capita income and poverty rates--all measures indicative of family abilities to finance costs of higher education from their own resources.

Pell Grant Program Participation Rate
as a Function of Median Household Income by State
1993-94



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The Mortenson Research Seminar on Public Policy Analysis of Opportunity for Postsecondary Education

Number 44 **Iowa City, Iowa** **February 1996**

Freshman-to-Sophomore Persistence by Institutional Level, Control and Academic Selectivity

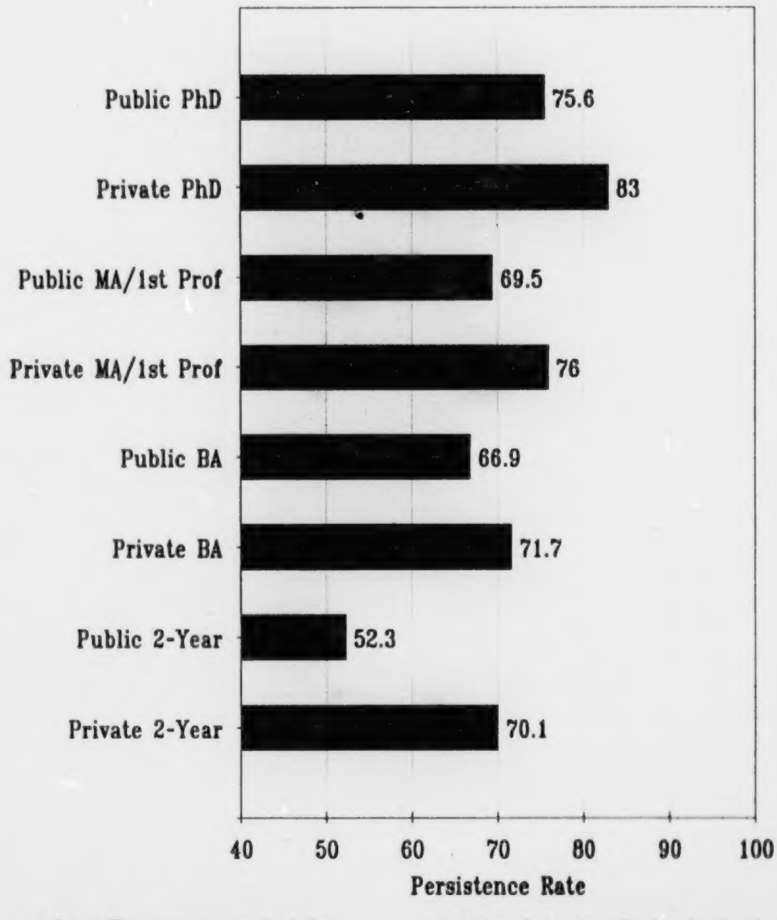
Most freshmen enter college to earn a vocational certificate or academic degree. To receive the credential they must enter college then persist through their chosen program of studies to completion.

Not all who start this endeavor, however, complete it and graduate from college. Not completing college may involve many patterns of dropping-out of college after starting, transfer to one or more institutions, and/or stopping-out and returning later to complete academic work required for graduation.

In this analysis, we examine data reported by institutions on one dimension of academic progress: persistence from the freshman to the sophomore year of college. Reports from institutions to The American College Testing Program--ACT--permit classification of institutional data on freshman-to-sophomore student persistence by institutional level, control and academic selectivity.

Attrition in college is likely to occur early in the academic experience, during the freshman year or prior to the beginning of the sophomore year of college. The data reported here suggest that student persistence to the sophomore year of college varies widely between institutions of different levels, control and academic selectivity. These persistence rates reflect both characteristics of students as well as characteristics of the institutions in which they enroll.

Freshman-to-Sophomore Persistence Rates
by Institutional Level and Control
1995



The results offer important insights into student persistence. They provide reference data for institutions that may wish to compare the rate at which students in their own institutions persist to the rates of other institutions of similar level, control and academic selectivity. They also offer guidance to students wishing to consider their chances for retention at different *institutions.*

The Data

Each year the American College Testing Program surveys American colleges and universities to gather a wide variety of data on institutional and student characteristics to help students plan for the college admissions process. These data are published in ACT's *College Planning/Search Book*, and are used in ACT's Assessment score reports, DISCOVER program, and other services and reports. The institutional data include majors available, student profiles, tuition and fees, admissions selectivity, special programs, tests required, deadlines and more.

College Planning/Search Book, A Workbook and Resource for College Planning, 1995-96 Edition. (1995.) Iowa City, IA: The American College Testing Program.

In 1995 there were 2583 public and private institutions that participated in the ACT Institutional Data Questionnaire survey. These institutions are classified for our purposes here by highest degree awarded: associate degree, bachelor's degree, master's/1st professional degree or doctorate. They are also classified by control, public or private. The numbers of participating institutions by level and control in 1995 were as follows:

Public PhD	188
Private PhD	145
Public MA/1st Professional	234
Private MA/1st Professional	442
Public BA/BS	73
Private BA/BS	516
2-Year Public	802
2-Year Private	183

Institutions are also asked to report their freshman admissions policy as applied to in-state or in-supporting-area students. These admissions categories are:

- **Highly selective** (majority of accepted freshmen in top 10% of high school graduating class)
- **Selective** (majority of accepted freshmen in top 25% of high school graduating class)
- **Traditional** (majority of accepted freshmen in top 50% of high school graduating class)
- **Liberal** (some freshmen from lower half of high school graduating class)
- **Open** (all high school graduates accepted, to limit of capacity)

In compiling these data internally, ACT has calculated average ACT and SAT equivalents for the above admissions selectivity ranges. Those used for 1995 reporting are as follows:

Admissions Selectivity	Mean ACT	Mean SAT
Highly sel.	>26	>1100
Selective	22-25.9	931-1099
Traditional	18-21.9	800-930
Liberal	15-17.9	700-800
Open	<15	<700

(Note that both the ACT Assessment and the SAT have been rescaled in the 1990s. Therefore, strict longitudinal comparisons involving ACT and SAT scores such as those employed here may not be appropriate.)

ACT reports on freshman-to-sophomore persistence were first compiled in 1983 and have been compiled each year between 1985 and 1995. Copies of these reports--referred to as National Dropout Rate tables--are available from Wes Habley, Educational Associate, Educational Services Division, ACT, at (319) 337-1483.

Level and Control

In the 1995 survey, 2583 institutions

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Mission Statement

This research letter is founded on two fundamental beliefs. First, sound public social policy requires accurate, current, independent, and focused information on the human condition. Second, education is essential to the development of human potential and resources for both private and public benefit. Therefore, the purpose of this research letter is to inform those who formulate, fund, and administer public policy and programs about the condition of and influences that affect postsecondary education opportunity for all Americans.

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reported that on average 66.9 percent of the freshmen they had enrolled in the previous fall's freshmen class had returned for their sophomore year of college.

This proportion varied widely across institutions of different levels and control, as shown in the figure on page 1 of this issue of OPPORTUNITY. The proportion of freshmen still enrolled as sophomores ranged from an average of 52.3 percent in public 2-year colleges to a high of 83.0 percent among private PhD granting universities.

In reviewing these data, several points must be made. First, these are *averages for institutions* and do not measure the freshman-to-sophomore persistence rate for all freshmen.

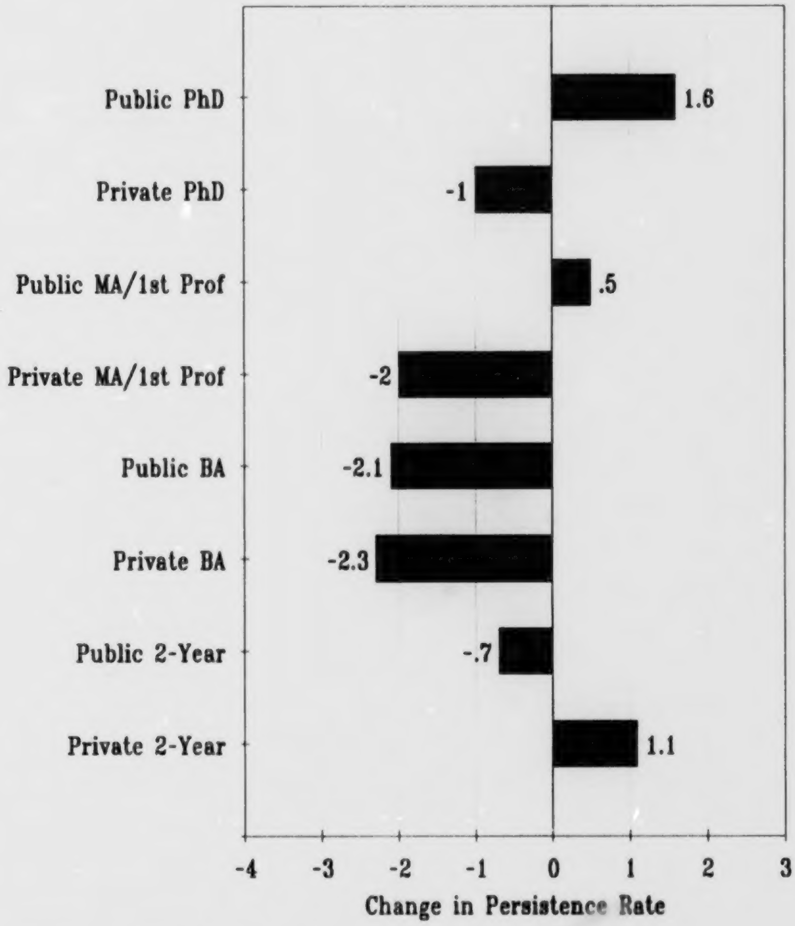
Second, as averages of different persistence rates, there is variability in persistence rates within each group of institutions. This variability--calculated standard deviations for each group mean persistence rate--imply that freshmen persist to the sophomore year at considerably higher rates in some institutions more than they do in others, even when institutional level and control are held constant. The standard deviations of the means shown in the chart on page 1 are as follows:

Public PhD	10.8%
Private PhD	12.1%
Public MA/1st Professional	11.3%
Private MA/1st Professional	11.7%
Public BA	13.1%
Private BA	14.9%
Public 2-Year	15.5%
Private 2-Year	17.3%

As will be shown shortly in this analysis, these standard deviations drop sharply among institutions that practice the most selective admissions policies.

Third, at each degree level, freshman-to-sophomore persistence is higher in private colleges and universities than it is in public institutions. Among universities that award the PhD, the persistence rate for private institutions exceeds that for publics by 7.4 percent. Among MA institutions, the persistence rate for privates exceeds that for publics by 6.5 percent. Among BA/BS granting colleges, the private rate exceeds the public rate by 4.8 percent. And among 2-year colleges, the rate for private institutions exceeds the rate for public institutions by 17.8 percent in 1995. We will revisit this important issue when the control for academic selectivity is added to this analysis.

Change in Freshman-to-Sophomore Persistence Rates by Institutional Level and Control 1985 to 1995



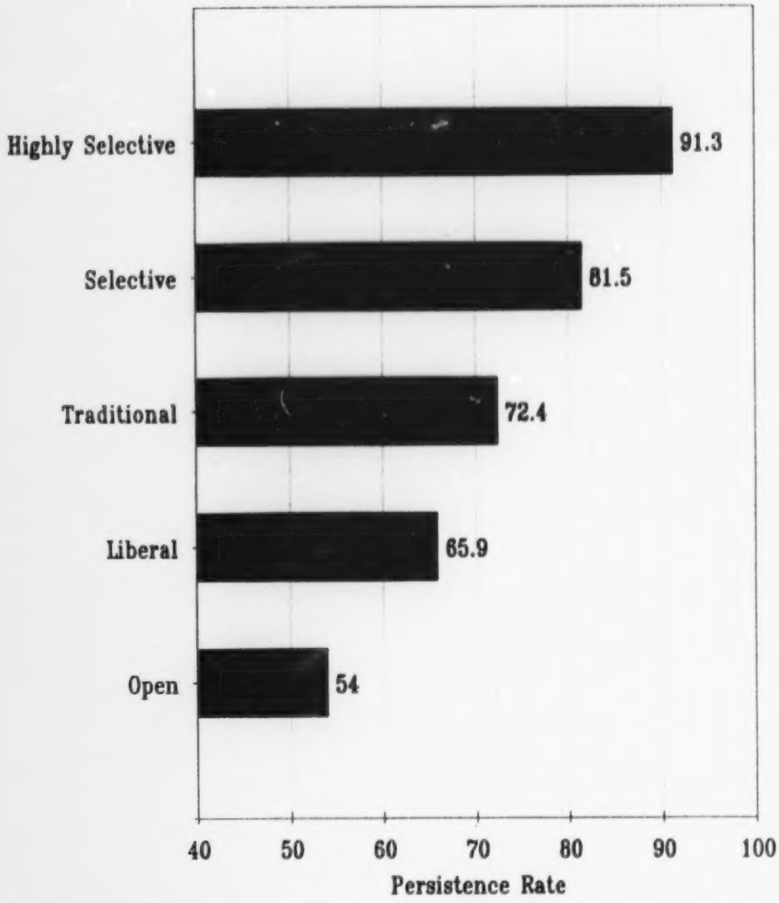
Changes: 1983 to 1995

Over the twelve-year period between 1983 and 1995, freshman-to-sophomore persistence rates for institutions have declined slightly, from 68 percent in 1983 and 1985 to 66.9 percent by 1995.

This slight overall decline, however, masks greater changes in freshman-to-sophomore persistence rates within groups of institutions. As shown in the above figure:

- Persistence rates edged upward in public PhD, public MA and private

Freshman-to-Sophomore Persistence Rates
by Institutional Academic Selectivity
1995



2-year institutions between 1985 and 1995.

- Persistence rates declined by two percent or more in private BA, public BA and private MA institutions between 1985 and 1995.

An overview of the trend in these data suggests that the dropoff in the overall rate of student persistence was particularly acute between 1993 and 1995.

Academic Selectivity

Student persistence in higher education is strongly related to their academic backgrounds: previous academic success and performance on test scores, for example. Therefore, it seems reasonable to expect that institutions with the most academically selective admissions policies should have the highest freshman-to-sophomore persistence rates. And in fact that is what we do find.

The above chart shows the average of institutional freshman-to-sophomore persistence rates in 1995 by the academic selectivity of institutional admissions. The range was from 91.3 percent among those highly selective institutions that admit a majority of their freshmen from the top 10 percent of their high school graduating class, to 54.0 percent among institutions that admit all high school graduates to the limit of their capacity.

Again, several points need to be made here. First, these freshman-to-sophomore persistence rates are the *averages for institutions* within each admissions selectivity group and do not necessarily measure persistence rates for all freshmen within each institutional group. (They would only in the obscure case where all institutions were of equal freshman class size or of symmetrical distribution around the group mean value.)

Second, these group averages belie the variability of persistence rates within each academic selectivity group of institutions. In 1995 the standard deviation of the institutional mean persistence rates was as follows:

Highly selective	5.5%
Selective	8.3%
Traditional	11.0%
Liberal	13.8%
Open	16.3%

Expressed another way, within each group of institutions, freshmen-to-sophomore persistence rates are higher than average in some institutions and lower in others.

Changes: 1991 to 1995

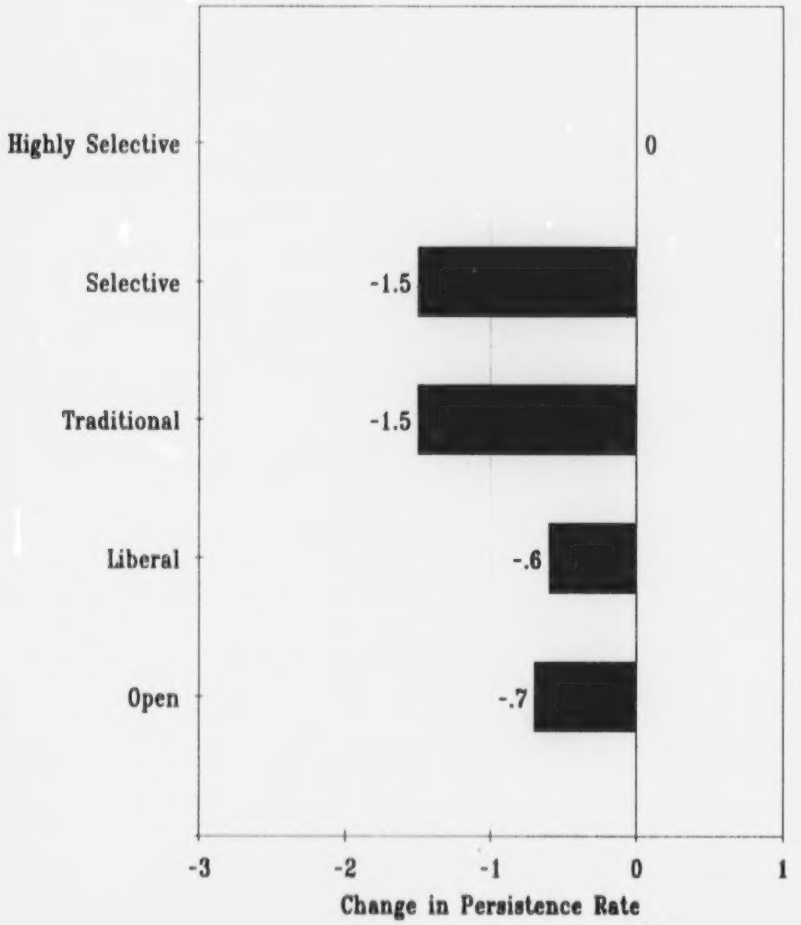
Freshman-to-sophomore persistence rates have edged downward, as noted previously. This downward trend appears to be most pronounced between 1993 and 1995.

In the chart on the following page, we have plotted the change in persistence rates by academic selectivity between 1991 and 1995. These rates remained stable in the most academically selective institutions, and decline the most in the selective and traditional admissions institutions.

These data appear to fluctuate from year to year, and thus overall trends are difficult to discern in these data. However, these data are consistent with data from the UCLA freshman survey that indicate growing importance of financial aid offers in institutional choice decisions of freshmen from families in middle income ranges.

These data suggest the possibility that institutions that serve students from upper-middle income families are encountering particular difficulties in attracting and holding these students in the 1990s.

Change in Freshman-to-Sophomore Persistence Rates by Institutional Academic Selectivity 1991 to 1995



Level, Control and Selectivity

To this point our analysis has shown that freshman-to-sophomore persistence rates vary separately by institutional level, control and academic selectivity. For the remainder of this analysis, we will examine these three institutional features simultaneously.

In particular, because of our focus on educational opportunity for students, we will examine institutional persistence rate data on how freshmen from different high school class rank backgrounds are likely to persist to the sophomore year in institutions of different levels and control.

The charts that begin on the following page show freshman-to-sophomore persistence rates for institutions that admit freshmen from about the same academic selectivity range. Here, within-group differences more nearly reflect differences in the environments of the institutions as they influence student persistence.

Among highly selective admissions institutions--those that enroll a majority of their freshmen from the top 10 percent of the high school graduating class--the persistence rates from the beginning of the freshman to the beginning of the sophomore year of college in 1995 averaged from 84.3 percent in public BA/BS granting colleges to 93.1 percent in private PhD granting universities. The weighted mean for all institutions in this group was 91.3 percent.

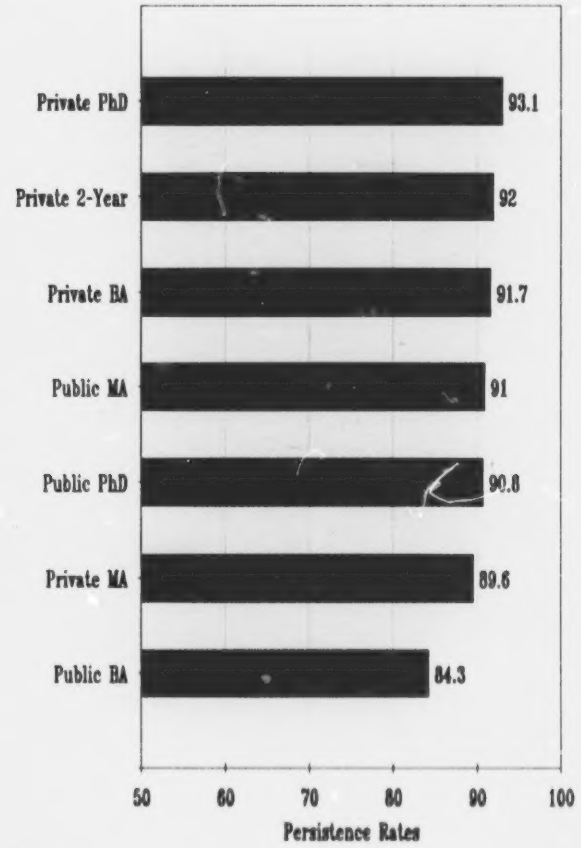
Between 1991 and 1995 the average freshman-to-sophomore persistence rates in highly selective institutions changed as follows:

Public MA	+6.8%
Public PhD	+2.2%
Private PhD	+1.4%
Public BA	-0.7%
Private BA	-2.3%
Private MA	-3.1%

Selective admissions institutions are those that admit a majority of their freshmen from the top 25 percent of the high school graduating class. In 1995 their average freshman-to-sophomore persistence rates ranged from 77.0 percent in public MA granting institutions to 95.7 percent in private 2-year institutions. The weighted average for all institutions was 81.5 percent.

Between 1991 and 1995 the average freshman-to-sophomore persistence rates in selective admissions institutions changed as follows:

Freshman-to-Sophomore Persistence Rates for
Highly Selective Admissions Institutions by Level and Control
1995



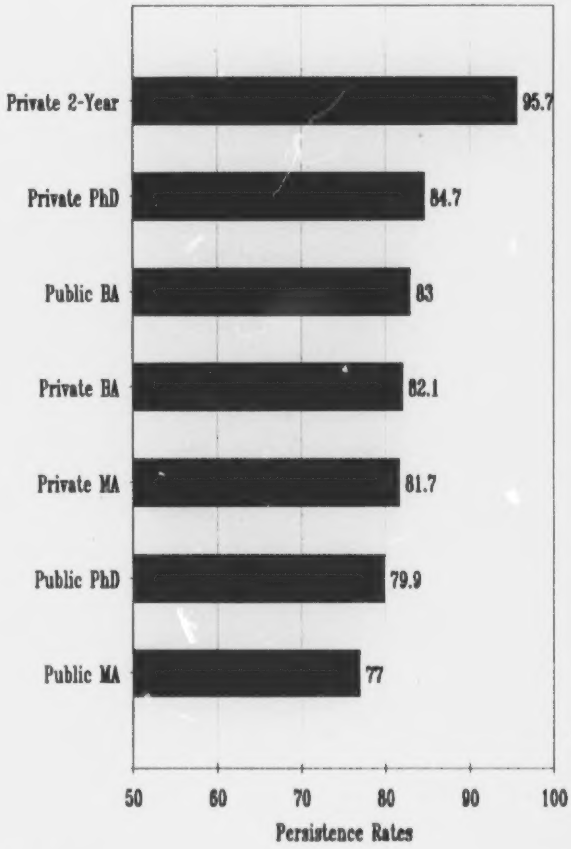
Private AA	+2.4%
Public MA	+0.5%
Private PhD	+0.2%
Public BA	-0.7%
Public PhD	-1.1%
Private MA	-1.3%
Private BA	-2.6%

Traditional admissions institutions are those that admit a majority of their freshmen from the top 50 percent of the high school graduating class. In 1995 the average freshman-to-sophomore persistence rates was 72.4 percent, and ranged from 61.4 percent in public 2-year colleges to 95.7 percent in private PhD universities.

Between 1991 and 1995 the institutional average freshman-to-sophomore persistence rates in traditional admissions institutions changed as follows:

Private AA	+1.8%

Freshman-to-Sophomore Persistence Rates for
Selective Admissions Institutions by Level and Control
1995



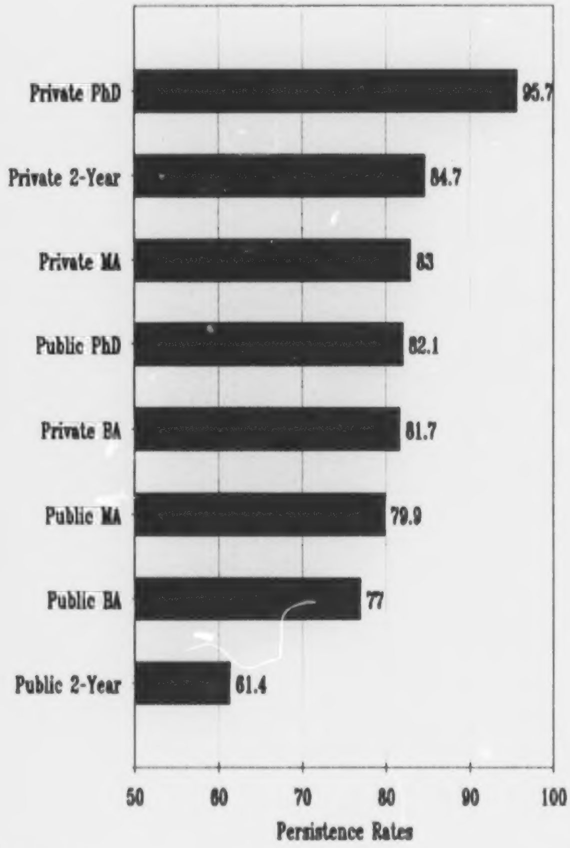
Private PhD	+0.2%
Public PhD	+0.1%
Public AA	-0.6%
Private MA	-1.5%
Public MA	-1.9%
Private BA	-3.1%
Public BA	-4.6%

Liberal admissions institutions are those that admit some of their freshmen applicants from the bottom half of the high school graduating class. In 1995 the average of the institutional freshman-to-sophomore persistence rates was 65.9 percent, and the range was from 59.5 percent in public 2-year colleges to 69.9 percent in public PhD universities.

Between 1991 and 1995 the institutional average freshman-to-sophomore persistence rates changed as follows:

Public AA	+2.5%
Public PhD	+0.6%

Freshman-to-Sophomore Persistence Rates for Traditional Admissions Institutions by Level and Control 1995



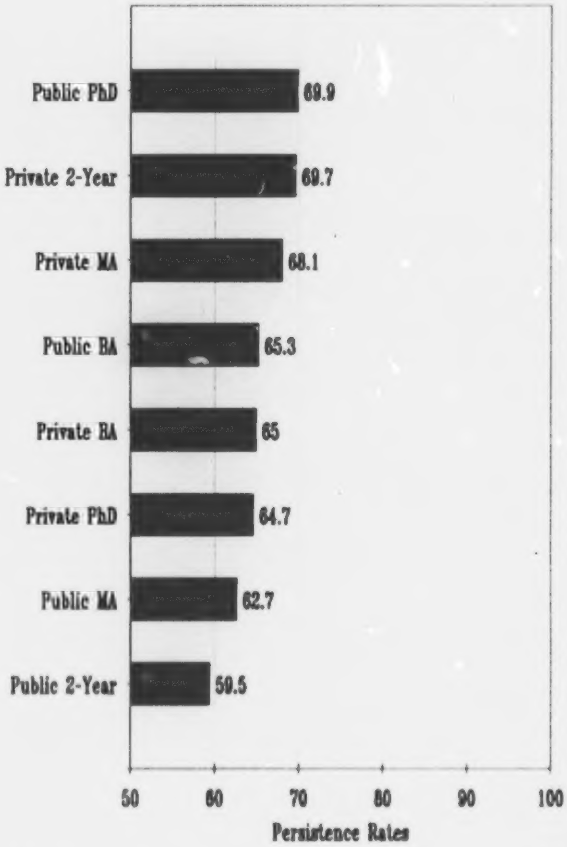
Public MA	-0.6%
Private BA	-1.0%
Private AA	-1.3%
Private MA	-1.5%
Private PhD	-3.6%
Public BA	-4.3%

Open admissions institutions admit all high school graduates to the limit of their capacity. In 1995 the average of the freshman-to-sophomore persistence rates for these institutions was 54 percent. The range was from 51.5 percent in public 2-year colleges to 70.7 percent in private MA degree granting institutions.

Between 1991 and 1995 the institutional average freshman-to-sophomore persistence rates in traditional admissions institutions changed as follows:

Public MA	+2.6%
Public AA	+0.1%

Freshman-to-Sophomore Persistence Rates for Liberal Admissions Institutions by Level and Control 1995



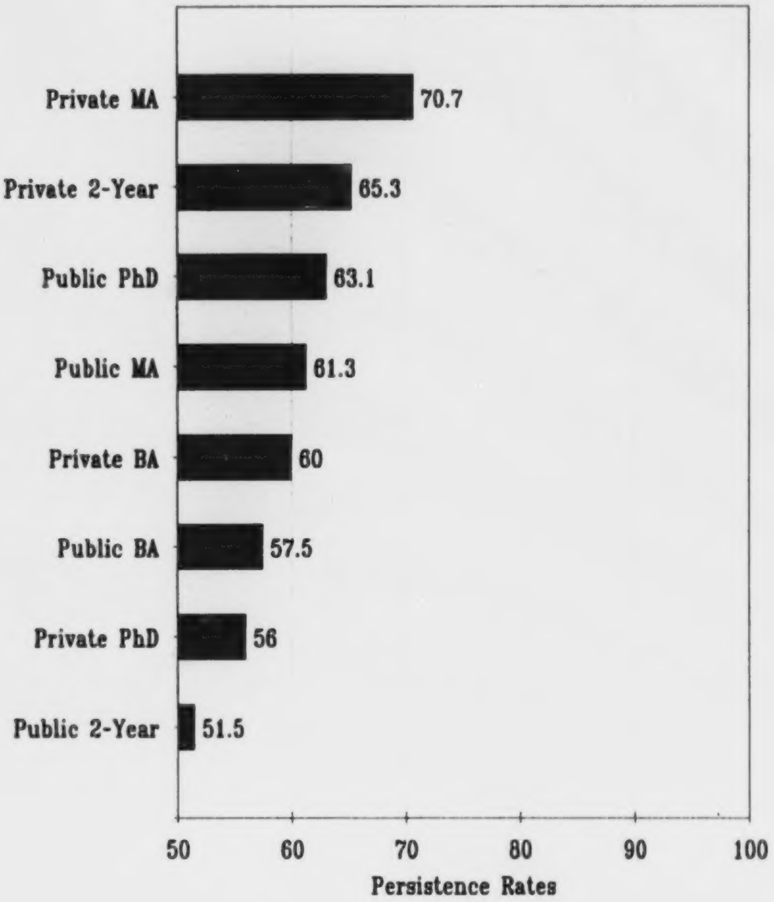
Public BA	-0.3%
Private BA	-1.1%
Private MA	-1.8%
Public PhD	-4.6%
Private AA	-4.9%
Private PhD	-23.7%

Persistence by Institutional Control

A cursory comparison of freshman-to-sophomore persistence rates--such as that charted on the first page of this issue of OPPORTUNITY--implies that persistence rates are notably higher in private than they are in public institutions.

However, since persistence rates are also clearly a function of the class-rank section of the high school class it would be premature to conclude that students persist at higher rates in private institutions than they do in publics. While the data reported by institutions to ACT are still too crude to address

Freshman-to-Sophomore Persistence Rates for Open Admissions Institutions by Level and Control 1995



this question precisely, the data do permit a general comparison and some general conclusions.

The chart on the following page shows freshman-to-sophomore persistence rates for all public and all private institutions controlling for their self-reported academic selectivity. These results are clear, consistent and significant:

> *At every level of academic selectivity, average persistence rates for private institutions exceed average persistence rates for public institutions.*

The reader should note, however, that these means have standard deviations that indicate some public institutions will have greater persistence rates than will some private institutions that attract freshmen from roughly similar class-rank ranges of the population of high school graduates.

The differences between public and private institutions are least among highly selective institutions and greatest among open admissions institutions.

- Among highly selective institutions, the persistence rate for private institutions exceeds the persistence rate for public institutions by 2.5 percent.
- Among selective institutions, the rate for privates exceeds the rate for publics by 3.6 percent.
- Among traditional admissions institutions, the private rate exceeds the public rate by 4.4 percent.
- Among liberal admissions institutions, the rate for privates exceeds the rate for publics by 4.2 percent.
- Among open admission institutions, the rate for privates exceeds the rate for publics by 11.2 percent, largely because the rate for public AA colleges is by far the lowest for any institutional type and control.

Summary and Conclusions

This analysis is based on data reported by nearly 2600 public and private colleges and universities to The American College Testing Program on ACT's Institutional Data Questionnaire. These data are used by ACT in a variety of reporting services to students and institutions using ACT Assessment services. Among these uses is ACT's *College Planning/Search Book* provided to students to assist them in their college selection.

The ACT published data on student persistence, like all data on student persistence and graduation rates published in college guide books, at face value reflects more about the academic backgrounds of the students enrolled at a given institution than it does about the environment and commitment of the institution to student persistence and success at graduation.

This issue was first examined in OPPORTUNITY in March of 1995 using data reported by institutions to *U.S. News and World Report* and published there in their September 26, 1994 issue on "America's Best Colleges." In our analysis of that data, we used only institutional data on mean/median SAT and institutional graduation rates for the samples of national universities and national liberal arts colleges to calculate an *expected* institutional graduation rate. We then compared each institution's reported graduation rate to its predicted graduation rate and ranked institutions by the difference.

That analysis showed that controlling only for mean/median SAT, correlations with institutional graduation rates of .80 for national universities and .64 for national liberal arts colleges could be obtained. The ranking showed that some institutions had actual graduation rates well above their predicted rates controlling for the academic abilities of the freshmen they enrolled, and others had actual graduation rates which fell well below their predicted rates.

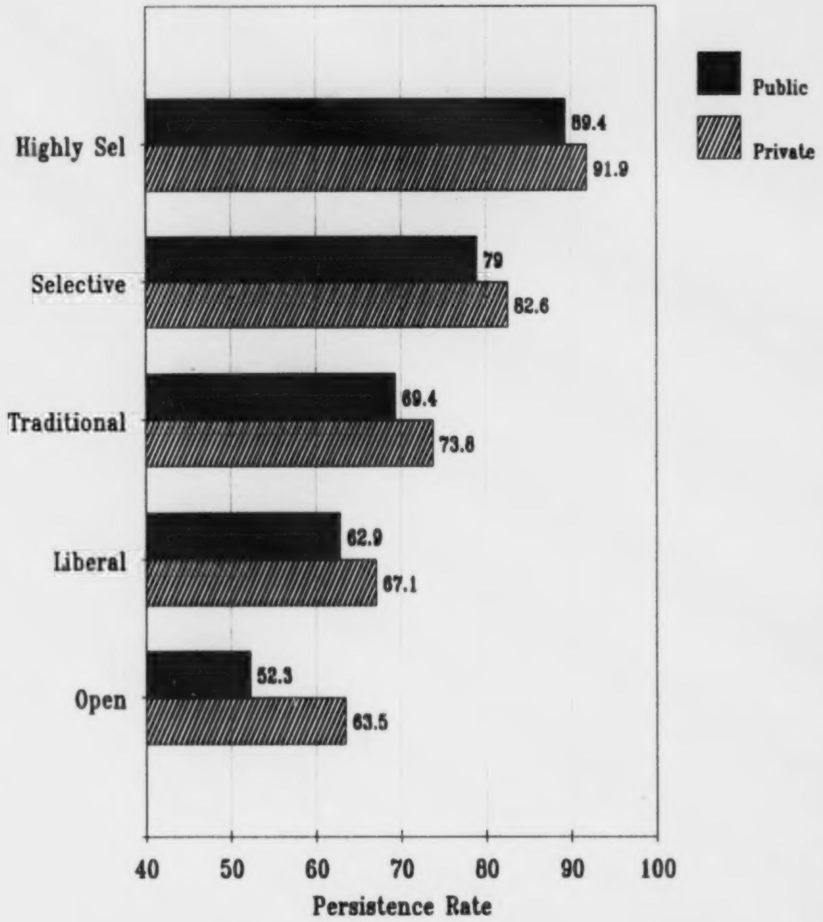
While this analysis was not complete due to incomplete model specification, the results showed that institutional graduation rates could be largely explained in terms of the academic profiles of admitted students. Remaining variance was not explained in that study. Copies of the analysis are available to subscribers to OPPORTUNITY upon request.

In this analysis of institutional freshman-to-sophomore persistence rates, the pre-college academic measure of class rank provided a substantial share of the explanation for differences between institutions in the rates at which entering freshmen reach the sophomore year in the same institution. Controlling for this measure in a crude fashion (institutionally reported broad-band measures of high school class rank), we find important differences in persistence rates between public and private institutions. These data indicate that students of any given high school class rank background are more likely to reach the sophomore year if they enroll in a private institution than if they enroll in a public institution. Private college enrollment adds from 2.5 to 11 percent to a student's chances of reaching the sophomore year, depending on where one graduated in one's high school class. The contribution of private higher education to persistence appears to be least among highly selective institutions, and greatest among least selective institutions.

But this model too is not completely specified. Further controls are needed to isolate and measure more accurately specific background and environmental contributions to student persistence in and graduation from college.

Since our initial analysis and report on institutional graduation rates, OPPORTUNITY has been preparing to undertake a more detailed analysis of institutional graduation rates. While still several months away from being reported, this study will incorporate suggestions made by subscribers to the study reported by OPPORTUNITY in March 1995.

Freshman-to-Sophomore Persistence Rates
by Academic Selectivity and Control
1995



FY1996 State Budget Actions

Higher education fared better in the FY1996 state budgeting process than it has since the late 1980s, according to data recently published by the National Conference of State Legislatures (NCSL). Overall, state budgets were in better shape than they had been since 1985. But corrections continued to crowd out all budget categories of state government expenditures. And fewer states indicated that higher education was a leading fiscal issue in 1995 than was indicated for any other budget category.

In short, under the best of fiscal circumstances, higher education found no restoration of the state funding base that has been sharply eroded for more than 15 years.

For the last 14 years, the National Conference of State Legislatures has collected and reported on state budget actions. This report provides an overview of state finances. The report focuses on state general fund budgets and more recently "earmarked" appropriations.

Five major categories of state budgets are reported in detail: Medicaid, K-12 education, higher education, corrections and AFDC.

Snell, R.K., Carter, K., Pérez, A.,and Rafool, M. (December 1995.) *State Budget Actions 1995.* Legislative Finance Paper #100. Denver: National Conference of State Legislatures.

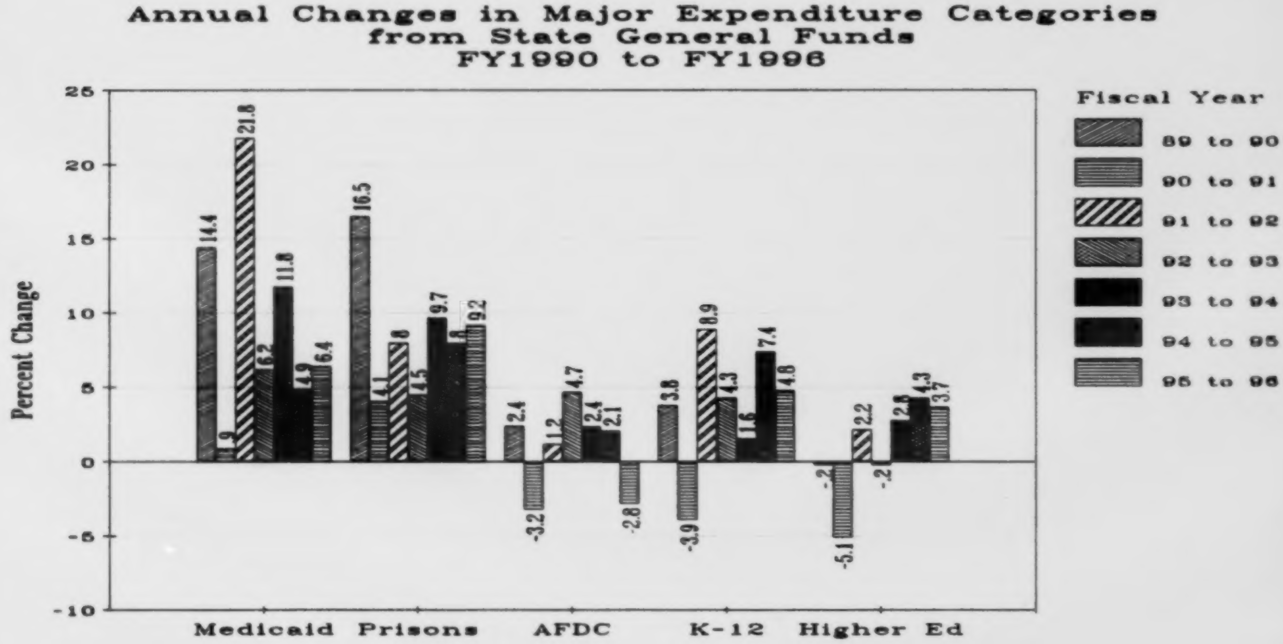
OPPORTUNITY has used this important early report on state finance of higher education for several years a) because it appears years earlier than all federal reports (IPEDS, NIPA, Census), and b) because it clarifies higher education's weak competitive position in state budget priorities on a state-by-state comparative basis.

State Finances

State fiscal health is assessed by the size of year-end balances. These are measured as the sum of general fund and rainy-day fund balances as a percentage of general fund expenditures.

NCSL traditionally regards as desirable a 5 percent year-end balance. In FY1995 states achieved an aggregate year-end balance of 5 percent for the first time since 1985, and for only the second time since 1980. The actual aggregate figure was 5.1 percent.

This accumulated balance reflects both economic growth as well as cautious state budgeting in the face of the revolution in federal budgeting taking place in Washington. Federal aid to the states will likely fall beginning in FY1996 and for subsequent years. In anticipation of these new responsibilities, state have projected



Percent Change in State Own-Source Appropriations for Major Program Categories
FY1995 Expenditures to FY1996 Appropriations

State	Higher Education	K-12 Education	Corrections	AFDC	Medicaid	General Fund Revenues	General Fund Approps
Nevada	11.0%	2.3%	15.7%	0.7%	1.9%	-8.4%	-12.3
Georgia	10.9	4.3	5.2	3.1	8.8	4.3	4.5
Texas	10.5	9.9	13.9	4.3	13.0	2.6	5.7
Colorado	8.0	7.2	13.1	-0.5	4.9	4.7	6.7
Ohio	7.4	10.4	16.2	-0.4	12.7	3.5	5.5
New Mexico	7.3	6.3	2.8	11.5	2.6	4.2	2.3
Pennsylvania	7.1	3.7	13.3	0.5	1.1	-1.0	3.0
North Dakota	7.0	7.1	12.5	-14.6	18.4	7.0	7.7
Missouri	6.8	8.5	27.2	-0.9	7.9	4.3	8.7
Utah	6.1	14.2	16.6	-4.1	4.9	7.7	8.1
Indiana	5.9	5.7	11.2	6.5	5.6	2.3	4.1
Illinois	5.4	6.0	10.3	4.4	0.8	4.2	4.4
Florida	5.4	5.4	50.2	-4.3	15.0	3.4	3.2
Arkansas	5.3	4.8	12.8	3.8	13.5	4.1	2.0
West Virginia	5.3	2.5	2.5	0.0	-1.8	2.3	1.9
Vermont	5.2	2.3	28.3	-2.4	9.1	6.1	5.8
Washington	4.9	3.3	5.5	9.0	5.3	0.4	5.0
Arizona	4.8	7.1	14.4	3.3	7.0	-0.7	1.6
Idaho	4.7	6.7	5.3	11.0	21.1	7.5	6.1
California	4.6	6.2	0.0	-6.5	-3.6	3.8	4.0
Nebraska	4.4	4.0	11.8	-1.4	12.2	4.9	2.5
Michigan	4.3	3.3	6.9	-10.6	8.7	4.0	3.9
Delaware	4.0	6.9	6.2	-2.8	11.6	1.3	12.3
Kentucky	3.9	3.7	7.2	-3.0	6.1	2.5	3.7
Massachusetts	3.4	11.1	1.5	-5.8	-1.6	2.5	4.5
Maryland	3.1	6.1	8.0	-2.7	5.0	4.0	6.2
South Dakota	3.0	-0.2	2.2	-7.1	6.7	2.7	6.2
Alabama	2.6	22.6	2.7	0.0	22.9	4.1	0.9
South Carolina	2.6	4.6	6.5	0.0	8.2	1.5	6.0
Maine	2.6	1.5	6.2	-15.2	11.6	N/R	N/R
Tennessee	2.1	6.3	6.2	8.4	8.6	6.0	5.1
Oklahoma	1.9	2.4	7.3	-8.3	4.3	3.5	2.3
Rhode Island	1.8	4.5	7.1	-8.9	3.7	4.0	3.9
Virginia	1.7	4.4	3.1	-1.3	1.6	5.6	3.3
Mississippi	1.6	-0.4	27.6	-4.0	30.1	0.0	0.9
New Jersey	1.4	7.7	-3.2	-7.4	4.6	3.7	4.4
Iowa	1.3	4.8	7.4	-11.6	4.0	2.9	5.4
Montana	0.8	2.7	28.9	9.1	7.3	2.2	5.0
Louisiana	0.7	2.3	11.4	-2.1	-28.4	2.3	0.1
Connecticut	0.1	3.2	7.6	-17.1	6.0	4.2	5.0
Wyoming	0.0	0.0	0.0	0.0	0.0	1.3	0.0
North Carolina	0.0	-0.2	2.1	7.0	13.4	-2.6	-1.4
Wisconsin	-0.9	10.0	16.3	-3.7	5.8	5.4	5.7
Alaska	-0.9	3.0	5.1	-1.0	8.6	-2.9	-2.1
Minnesota	-1.1	0.0	16.3	3.5	7.0	1.5	2.6
New Hampshire	-2.3	1.1	4.6	-29.0	-17.6	-11.0	-12.0
New York	-3.4	1.1	4.5	0.0	-4.5	-0.1	-2.1
Kansas	-3.9	2.2	3.4	2.1	5.4	3.3	3.8
Oregon	-4.8	22.0	20.1	9.8	12.5	-0.4	10.4
Average	**3.8**	**5.5**	**9.2**	**-2.8**	**2.8**	**2.6**	**3.4**
Median	**3.4**	**4.5**	**7.3**	**-0.9**	**6.1**		

Source: National Conference of State Legislatures, *State Budget Actions 1995*, December 1995.
No response from District of Columbia, Hawaii and Puerto Rico. No response from Maine in revenues and appropriations.

revenue growth conservatively.

The largest FY1995 year-end general fund balances were found in the following states:

Alaska	67.6%
Delaware	29.4%
Colorado	18.0%
Oklahoma	15.6%
Oregon	15.2%
Michigan	13.5%
Nevada	13.2%
Kansas	10.9%
Minnesota	10.6%
South Carolina	10.6%
Ohio	10.3%
Mississippi	10.0%

The only state to report a negative year-end balance was **California** (1.5 percent).

For FY1996 political and economic uncertainties lead to restrained state actions in three areas: revenue estimates, tax policy and enacted budgets.

Leading Fiscal Issues

As a part of its survey, NCSL asked a legislative fiscal officer in each state to identify the top three issues in the previous legislative session. Their responses are indicative of higher education's budget priority in the states:

Leading fiscal issues	States
Tax cuts	23
K-12 education/finance	17
FY1995-FY1996 budget	12
Criminal justice/corrections	11
Welfare/social services	10
Health service/Medicaid	7
Property tax reform	7
Higher education	4

The four states that identified higher education as a leading fiscal issue were **Arizona, Colorado, Mississippi and Washington**. With the exception of Colorado, the table on the previous page does not suggest these states treated higher education much differently than did other states in FY1996 state budgeting.

FY1996 Spending Priorities

Generally, state appropriations for FY1996 compared to FY1995 expenditures were increased by the amount of inflation, which had been projected by the Congressional Budget Office to be 3.3 percent.

However, differences in the rate of increase across budget categories reflect changes in state budget priorities. The change in general fund appropriations between FY1995 expenditures and FY1996 appropriations were as follows:

Corrections	+9.2%
Medicaid	+6.4%
K-12 education	+4.8%
Higher education	+3.7%
AFDC	-2.8%

Higher Education Funding

State appropriations for higher education for FY1996 were $45.0 billion, including $42.2 billion from general funds and $2.9 billion from earmarked funds. This was an increase of 3.8 percent from all sources (3.7 percent from state general funds) compared to FY1995 expenditures. This was down from the comparable 4.3 percent increase in FY1995 compared to the prior fiscal year.

Across the states the increase ranged from an 11.0 percent increase in **Nevada** to a 4.8 percent decrease in **Oregon**.

While the rate of increase in state appropriations to higher education slowed in FY1996 compared to FY1995, higher education's share of state general fund appropriations increased in FY1996 for the second year in a row. Over the last few years higher education's share of state general fund appropriations has been shrinking:

Fiscal Year	Percent of State General Fund Approps
1996	11.9%
1995	11.7%
1994	11.6%
1993	12.9%
1992	13.0%
1991	13.4%

In FY1989, higher education's share of state general fund appropriations had been 14.0 percent.

This loss of state general fund share has readily measurable dollar consequences. For example, if in FY1996 higher education had been appropriated its FY1989 share of state general funds, instead of the $42.2 billion actually appropriated, higher education would have been appropriated $49.7 billion in state general funds for FY1996. The difference--$7.5 billion--was diverted to other state budget priorities, mainly corrections and Medicaid. For the most part, public colleges and universities made up for the loss in state funding by increasing tuition and fee charges to students.

In addition to state general funds, higher education was appropriated $2.9 billion in earmarked funds. This was 6.3 percent of all state own-fund appropriations. These earmarked funds are limited to 24 states, the largest being **Tennessee, Florida, Texas, Georgia, Illinois, Kansas, California, Missouri and Mississippi.**

State Reports

The FY1996 NCSL survey sought information from the states for unusually large increases or decreases in state appropriations for higher education. The reports:

Nevada: Enrollment growth and lawmakers' concerns about underfunding higher education for the last two years.

Georgia: Salary increase of 6 percent for faculty, and increased spending for research and state technical colleges.

Texas: Statutory change in earmarked higher education fund required increased general funding.

Arkansas: General obligation bonds of $214 million for projects at institutions.

Mississippi: $20 million for tuition assistance based on financial need and scholastic achievement.

Washington: Increase of $55 million for enrollment growth and for financial aid programs.

Oregon: The largest percentage decrease in state funding in FY1996 among the states was primarily the result of shifting the state teaching hospital off the higher education budget and into a public corporation.

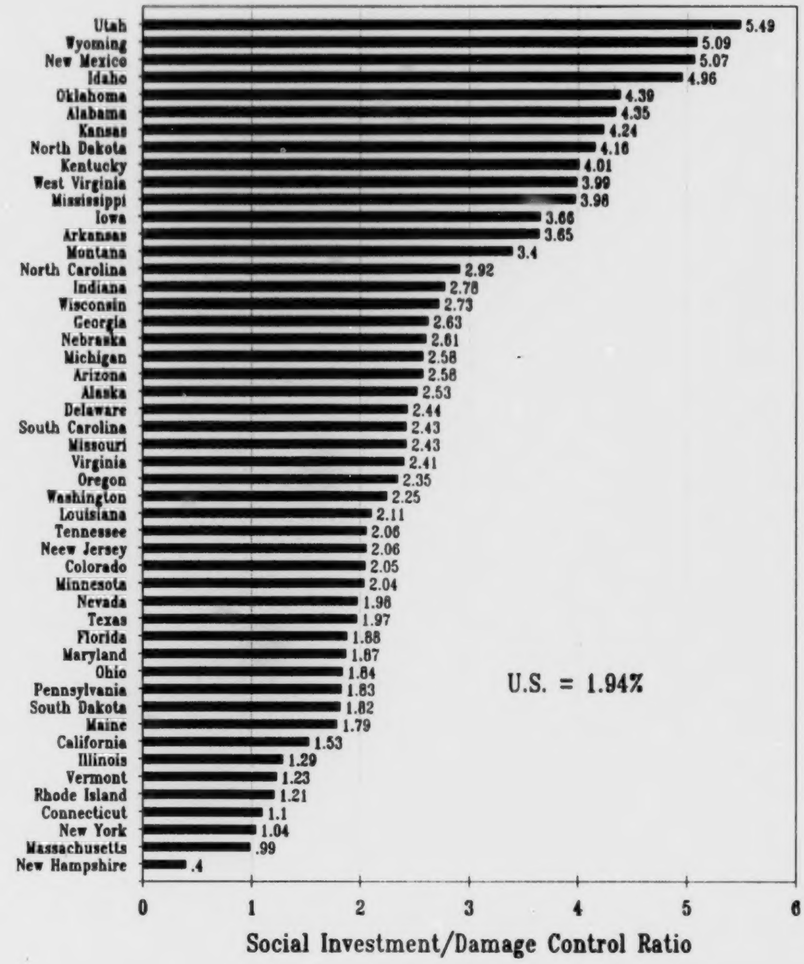
Kansas: Large, one-time expenditures in FY1995 accounted for the FY1996 decline in total spending.

Social Investment/Damage Control

State budget expenditures reflect choices made by elected representatives about what is important at this time in each state.

We have categorized the five budget categories reported by NCSL for FY1996 as social investment in the future (K-12 education plus higher education) or social damage control (corrections plus AFDC plus Medicaid). Then, for each state, we have calculated the ratio of expenditures for social investment to expenditures for social damage control. The results are shown in the chart on this page.

State Social Investment/Damage Control
FY1996



Where this ratio exceeds one, states are spending more on social investment in the future than they are on social damage control. All but two states fit into this category. Some, such as the prospering Rocky Mountain states are investing 5 dollars into their futures for each dollar they are spending on social problems.

At the other end of this spectrum are two states--**Massachusetts** and **New Hampshire**--that are spending more on social damage control than they are on educating for their futures. While private higher education plays a far larger role in the New England states than it does in the Rocky Mountain states, the lack of social investment in education in these states compared to social damage control should be a matter of interest to those who plan to live their lives in such states.

Lawmakers' Views

The National Education Association released in January the results of in-depth interviews with 58 house and senate legislative committee chairs in 49 states. The results of these interviews help explain higher education's funding problems at the state level.

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National Education Association. (1996.) *The Politics of Remedy: State Legislative Views on Higher Education.* Washington, DC

As reported in the American Council on Education's *Higher Education & National Affairs*, 86 percent of the legislators interviewed said that state colleges and universities should become more focused on undergraduate education. Most felt that linkages between K-12 and higher education should be improved. In the survey, 88 percent wanted improved collaboration on teacher education issues, 82 percent on school reform and 79 percent on workforce preparation issues.

Consistent with data reported by NCSL and all other sources, these legislators said that compared to other issues before them, higher education was not a high priority. The competing issues drawing resources away from higher education were Medicaid, crime and correctional facilities, and elementary and secondary education.

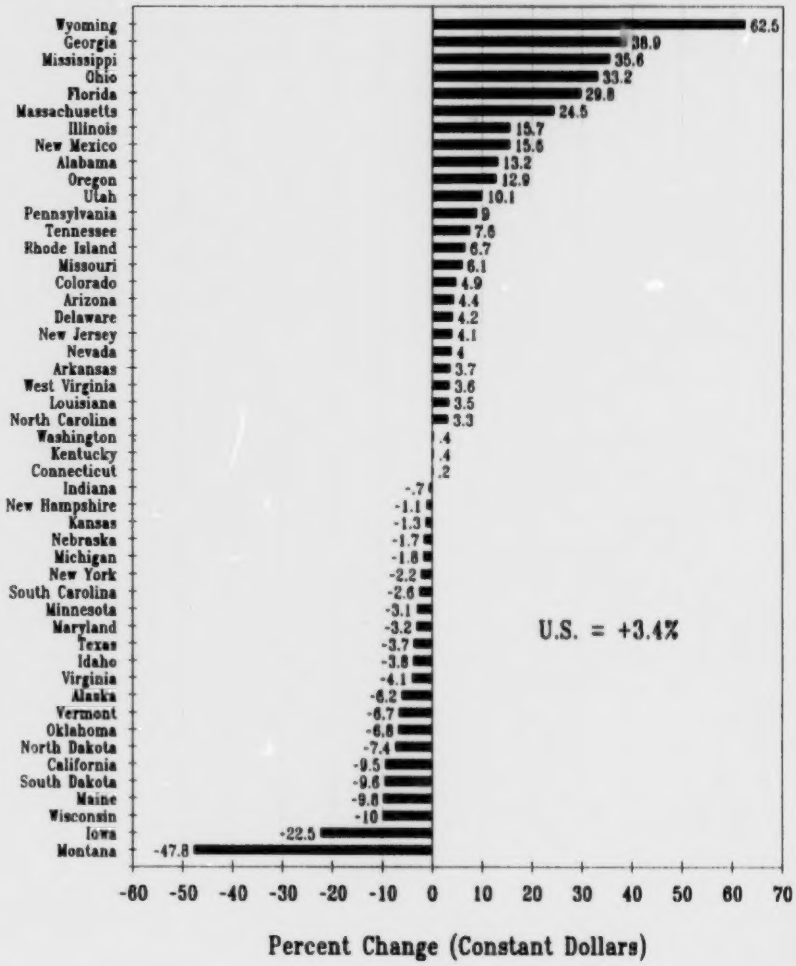
Moreover, state legislators were aware that higher education could be used as a budget-balancer. Public colleges and universities could still raise needed revenues through tuition and fee increases.

In the near future increased funding for higher education is very unlikely, according to the legislators surveyed. When it does come, increased funding is likely to be linked to performance measures such as increased enrollment, graduation rates, or other measures.

Three Year Changes

Between FY1993 (expenditures) and FY1996 (appropriations), inflation-adjusted total state funding for higher education increased by 3.4 percent. But just as states vary widely in their social investment in the education of their future population compared to social expenditures for social damage control in their present population, the mean belies great variation among the states.

Change in State Funding for Higher Education
FY1993 Expenditures to FY1996 Appropriations



At one extreme are states that have increased real dollar social investment in their higher education systems by 25 percent or more in just the last three years. These states include **Wyoming, Georgia, Mississippi, Ohio, Florida** and perhaps **Massachusetts**. At the other extreme are states that have reduced constant dollar state funding for higher education by about 10 percent or more. These states include **Montana, Iowa, Wisconsin, Maine, South Dakota and California.**

Clearly states hold a very wide variety of views about the importance of funding higher education systems in their states.

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Part 2 . . . *. . . of ? parts*

What's Wrong with the Guys?

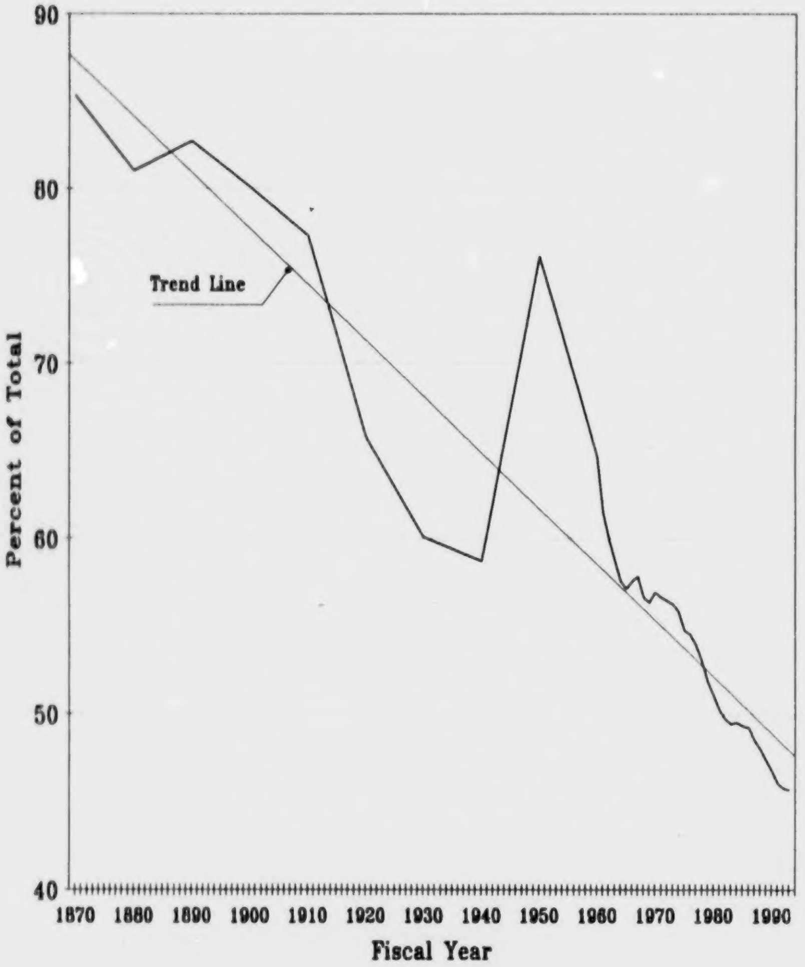
(continued)

In last September's OPPORTUNITY we presented our analysis of higher education enrollment data that suggested that compared to men and compared to the past record for women, women had made simply enormous progress in higher educational attainment since the end of World War II.

But this conclusion raised the question: Why hadn't men made comparable educational progress during this same period of time? In fact, while the proportion of women between the ages of 25 and 29 that had completed four years or more of college had increased by 3.9 percent between 1976 and 1994, the proportion for men had decreased by 5.0 percent.

Since last fall we continue to come across data that lead us to both rejoice at the success of women in higher education and at the same time leave us more perplexed than before about what is happening to young American men, especially in higher education. Our review of projections of bachelor degree awards published by the National Center for Education Statistics leads us to believe that NCES does not understand this phenomenon either. Data such as those that follow deepen our concern for what is happening to young males in America.

Proportion of Bachelor's Degrees Awarded to Males
1870 to 1993



Distribution of Bachelor's Degrees by Gender

With the exception of the large blip in 1950--following the return of the GIs from World War II--the proportion of bachelor's degrees awarded to males has been declining steadily and sharply since 1870 when the earliest records were gathered on degrees awarded by gender. In 1870 85.3 percent of all bachelor's degrees went to men. By 1940 the proportion had dropped to 58.7 percent. Then followed the huge disruption of World War II that had worked its way through higher education by the late 1950s.

1981 was the last year when more bachelor's degrees were awarded to males than females. In 1982 49.7 percent went to men and 50.3 percent to women. In 1993, the most recent reported year, 45.7 percent of all bachelor's degrees went to men.

The number of women receiving bachelor's degrees exceeded the number for men by almost exactly 100,000 in 1993.

We have extrapolated the trend in the extant data between 1870 and 1993. At the rate of the last 124 years, the proportion of bachelor's degrees awarded to males would drop to zero by 2144. That is, based on the historical data, in about 150 years all bachelor's degrees will be awarded to women and none to men.

For two reasons we think this could actually occur much sooner. First, the rate of shift has been below the long-term trend line since the mid 1970s, suggesting that a trend line plotted through data since about 1960 would intercept zero well before the year 2145.

Second, the recent projections of prison populations made by an Iowa criminal justice instructor suggests that before the end of the next century all American men will be behind bars anyway. At the current rate of incarceration of the population, every black will be in prison by 2066, and the last white will be locked up by 2096. Currently about 95 percent of those in prison are males.

The National Center for Education Statistics has projected bachelor's degrees by gender for the years between 1994 to 2005. These projections all assume that males will continue to receive about 45 percent of the bachelor's degrees awarded through 2005.

However, our September 1995 report in OPPORTUNITY focuses on differences between males and females in high school graduate rates, college continuation rates and four-year college completion rates. This analysis provides little evidence to support the NCES projection assumption. Rather, these foundations of four-year college attainment are mostly still pointing toward further growing disparity in the distribution of bachelor's degrees by gender.

Further Study

OPPORTUNITY continues to gather and examine data by gender on educational progression. Two studies nearing completion begin to suggest why males have become an under-represented population in undergraduate college enrollments.

The first study is based on data collected in the UCLA freshman survey and highlighted in the news release for the 1995 survey. These data show in striking form the time spent by college freshmen during the prior year on various activities. The data show young men spending more time than women engaged in exercising, partying, watching TV and playing video games. Young women, on the other hand, have spent more time than men doing household work, talking with teachers, participating in student groups, reading for pleasure, studying, and doing volunteer work.

The second study involves outreach programs to young men and women. These programs include Upward Bound, Talent Search, other federal TRIO programs and community-based scholarship programs. Preliminary data from dozens of such programs invariably find more females than males being served--typically by a 2 to 1 margin. More to follow later.

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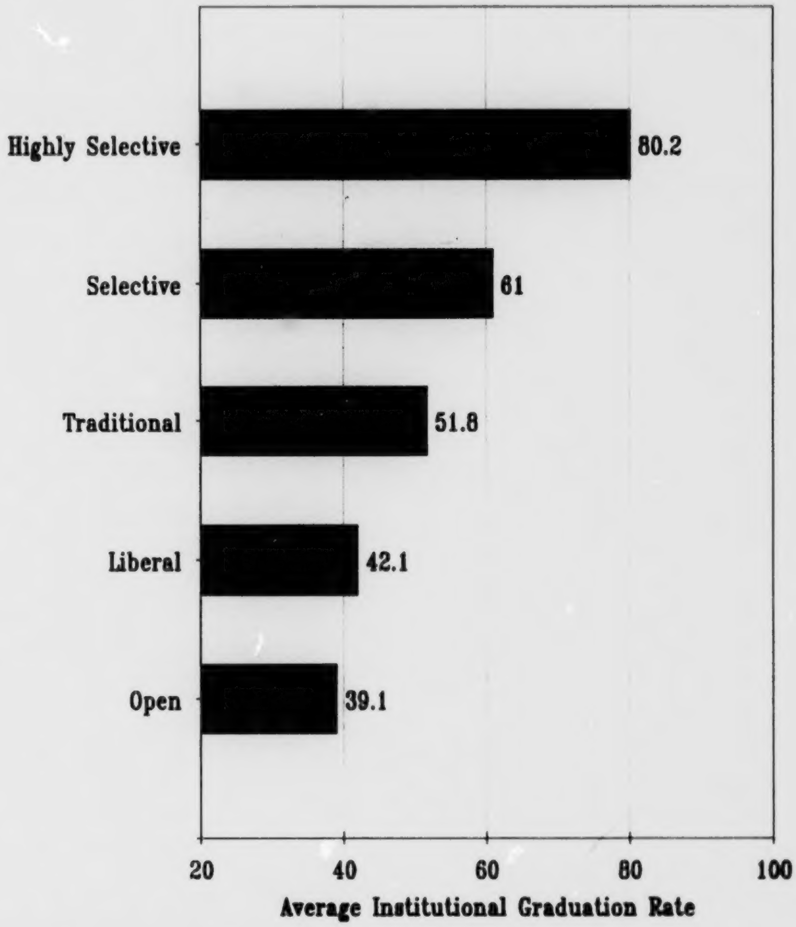
Postsecondary Education
OPPORTUNITY
The Mortenson Research Seminar on Public Policy Analysis of Opportunity for Postsecondary Education

Number 45 **Iowa City, Iowa** **March 1996**

Institutional Graduation Rates by Degree Level, Control and Academic Selectivity

Institutional Graduation Rates by Academic Selectivity for Institutions that Award Bachelor's Degrees 1995



According to the Fall 1995 National Norms for American college freshmen, 90.9 percent of all first-time, full-time college freshmen planned to earn a bachelor's degree from college.

- *In 2-year colleges, 75.8 percent of these freshmen expected to earn at least a bachelor's degree.*
- *In 4-year colleges, the proportion rose to 97.2 percent.*
- *In universities, the proportion was 98.0 percent.*

In contrast to these data, the Census Bureau's Current Population Survey found in March of 1993 that just 44.3 percent of those 15 and over with at least some college had completed at least a bachelor's degree. Of course this included many still in college. Among older age groups, the CPS found:

- *Among 25 to 29 year olds, 46.4 percent of those with some college had completed their bachelor's degrees.*
- *Among 30 to 34 year olds, the proportion was 47.0 percent.*
- *Among 35 to 39 year olds, the proportion was 47.6 percent.*
- *Among 40 to 44 year olds the proportion rose to 50.3 percent.*
- *Among those 45 to 49, the proportion was 51.8 percent.*

Apparently many entering college freshmen end their higher educations well short of their plans. Roughly speaking, about half of those who plan to earn a bachelor's degree will do so. The other half will get something less: about 69 percent will leave college without a degree, another 18 percent will leave with an occupational associate degree, and 13 percent will leave with an academic associate degree.

In this analysis we examine data on institutional graduation rates reported by 2444 public and private colleges and universities to The American College Testing Program (ACT). These data span from 1983 to 1995.

In the ACT system of data collection, institutional graduation rates are calculated at 3 years for associate degree granting institutions, and 5 years for institutions that award the bachelor's degree. This is different for 4-year institutions from both the NCAA and Student-Right-to-Know intervals of six years. It is also somewhat at odds with the reported greater length of time students are taking to earn their bachelor's degrees. However, the consistency of the data collected and reported by ACT permits some very important time-series descriptions of changes in institutional graduation rates over time.

An especially important interpretation of these data is the control for academic selectivity at the point of admissions. While every college guide reports raw institutional graduation rate data, in their raw form these data say more about the academic backgrounds of admitted freshmen than they do about how successful each institution is in graduating those freshmen it admits.

We consider this a most serious deficiency in the reporting of data on institutional graduation rates, especially where IGRs are used to rate and rank institutions, as in the annual *U.S. News and World Report* ratings of "America's Best Colleges." OPPORTUNITY has re-analyzed these data controlling for the SAT scores of admitted freshmen (March 1995). We found and reported that at some institutions actual IGRs are well above what might be expected given the academic characteristics of admitted freshmen, while IGRs at other institutions are well below what one might expect given the academic backgrounds of students admitted to these institutions. (Copies of this analysis are available to subscribers by fax on request.) While requiring further refinement (a project underway at OPPORTUNITY), these differences between actual and predicted IGRs would indeed be suitable measures of institutional performance appropriate to rating and ranking of institutions in college guides.

Here we summarize our analyses of institutional graduation rates for public and private institutions by highest level of degree awarded and academic selectivity. We examine institutional graduation rates for institutions that award the associate's degree, and for institutions that award the bachelor's degree.

The Data

Data used in this analysis is reported by institutions participating in ACT's annual Institutional Data Questionnaire survey. ACT collects these data for a variety of reporting services associated with the ACT Assessment and other services ACT provides to students and institutions.

Institutions are classified by academic selectivity according to their responses to the following question:

> *Check the category which best describes to prospective students your freshman admissions policy (as applied to in-state or in-supporting-area students).*
>
> *1. **Highly selective** (majority of accepted freshmen in top 10% of high school graduating class)*
>
> *2. **Selective** (majority of accepted freshmen in top 25% of high school graduating class)*
>
> *3. **Traditional** (majority of accepted freshmen in top 50% of high school graduating class)*
>
> *4. **Liberal** (some freshmen from lower half of high school graduating class)*
>
> *5. **Open** (all high school graduates accepted, to limit of capacity*

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Mission Statement

This research letter is founded on two fundamental beliefs. First, sound public social policy requires accurate, current, independent, and focused information on the human condition. Second, education is essential to the development of human potential and resources for both private and public benefit. Therefore, the purpose of this research letter is to inform those who formulate, fund, and administer public policy and programs about the condition of and influences that affect postsecondary education opportunity for all Americans.

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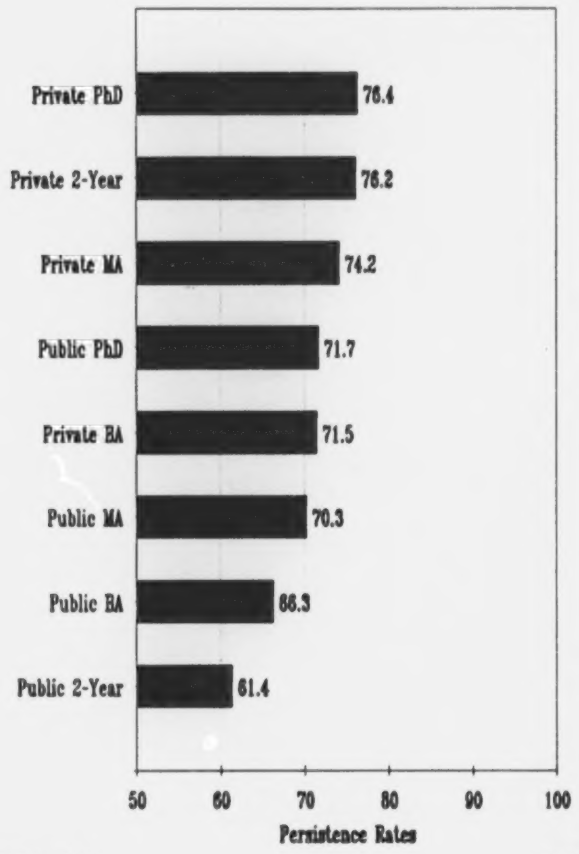
ERRATA

In the February 1996 issue of **OPPORTUNITY**, the first chart on page 7 contains mostly bad data points. Please insert this corrected page 7 in your February issue.

The data on freshman-to-sophomore persistence rates for colleges and universities that practice traditional admissions policies are shown correctly in the first chart on the backside of this errata sheet.

We apologize to anyone that may have used the original published chart in error.

Freshman-to-Sophomore Persistence Rates for Traditional Admissions Institutions by Level and Control 1995



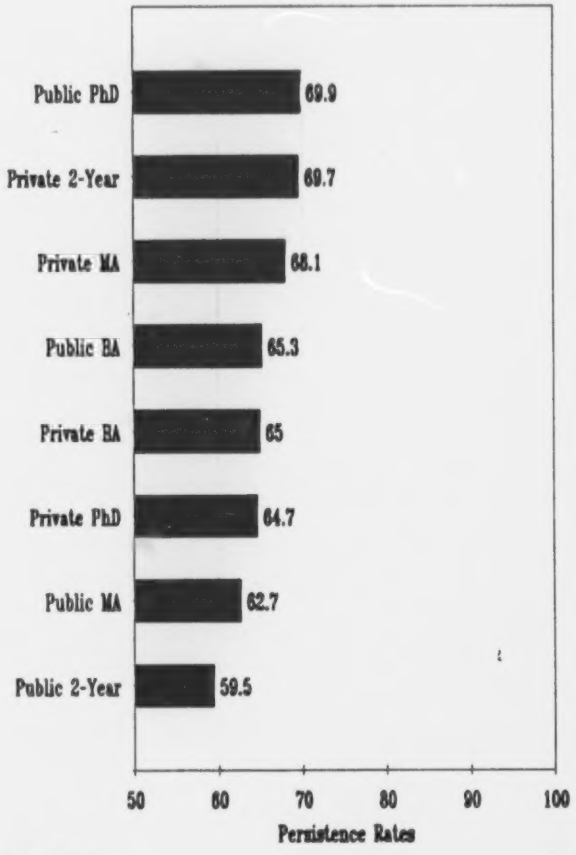
Public MA	-0.6%
Private BA	-1.0%
Private AA	-1.3%
Private MA	-1.5%
Private PhD	-3.6%
Public BA	-4.3%

Open admissions institutions admit all high school graduates to the limit of their capacity. In 1995 the average of the freshman-to-sophomore persistence rates for these institutions was 54 percent. The range was from 51.5 percent in public 2-year colleges to 70.7 percent in private MA degree granting institutions.

Between 1991 and 1995 the institutional average freshman-to-sophomore persistence rates in traditional admissions institutions changed as follows:

Public MA	+2.6%
Public AA	+0.1%

Freshman-to-Sophomore Persistence Rates for Liberal Admissions Institutions by Level and Control 1995



Public BA	-0.3%
Private BA	-1.1%
Private MA	-1.8%
Public PhD	-4.6%
Private AA	-4.9%
Private PhD	-23.7%

Persistence by Institutional Control

A cursory comparison of freshman-to-sophomore persistence rates--such as that charted on the first page of this issue of OPPORTUNITY--implies that persistence rates are notably higher in private than they are in public institutions.

However, since persistence rates are also clearly a function of the class-rank section of the high school class it would be premature to conclude that students persist at higher rates in private institutions than they do in publics. While the data reported by institutions to ACT are still too crude to address

In 1995 institutional graduation rate data were reported for 2444 institutions. They were distributed by control, degree level and academic selectivity as follows:

Control:	
Public	1268
Private	1176

Highest Degree Awarded:	
Associate	1016
Bachelor's	482
Master's	626
Doctorate	320

Selectivity:	
Highly selective	117
Selective	390
Traditional	635
Liberal	377
Open	925

Institutional graduation rates for institutions that award the bachelor's degree are tabulated in response to the following question:

> *Graduates, 4-year colleges only: % of entrants that ultimately complete the baccalaureate degree at this institution within 5 years after high school graduation.*

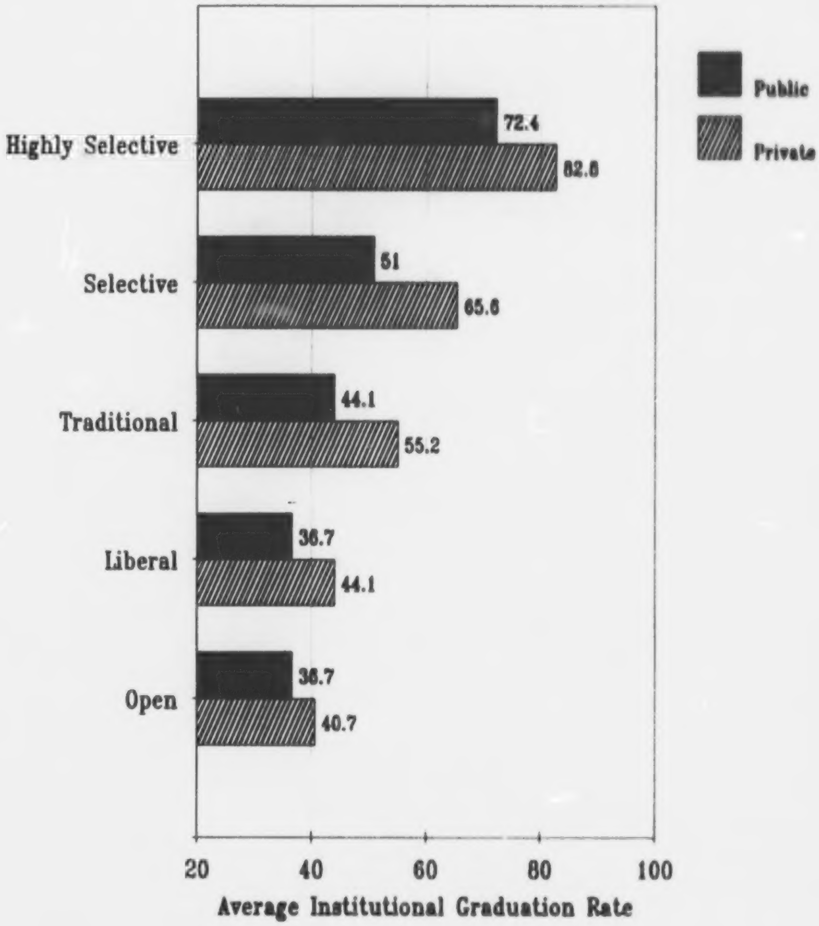
The data on institutional graduation rates at 2-year colleges are for those graduating within three years of admission.

These data are published by ACT each year in:

College Planning/Search Book, 1995-96 Edition. (1995.) The American College Testing Program.

The aggregate data reported are also available from ACT by contacting Wes Habley, Educational Associate, Educational Services Division, ACT, in Iowa City or by calling him at (319) 337-1483.

Institutional Graduation Rates by Academic Selectivity and Control for Institutions that Award Bachelor's Degrees 1995

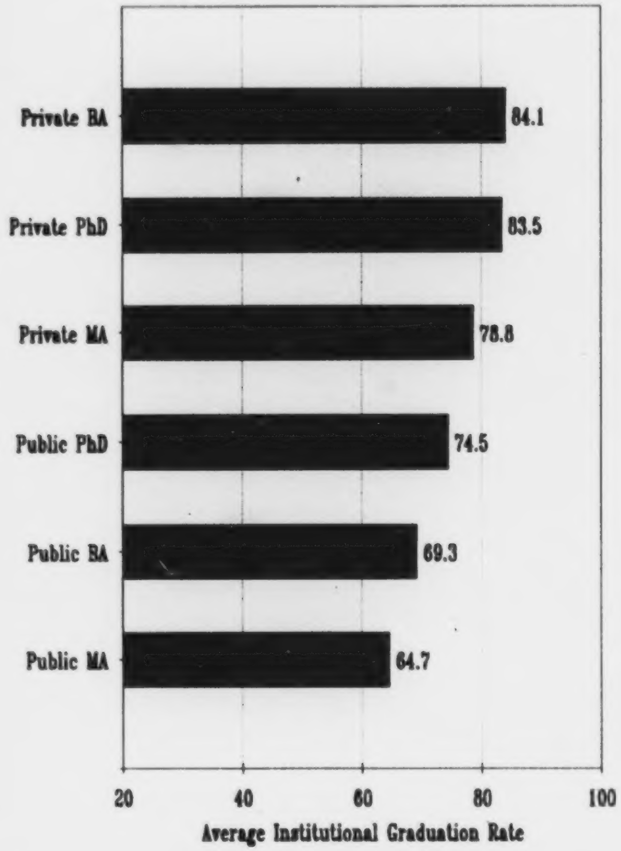


Institutional Graduation Rates

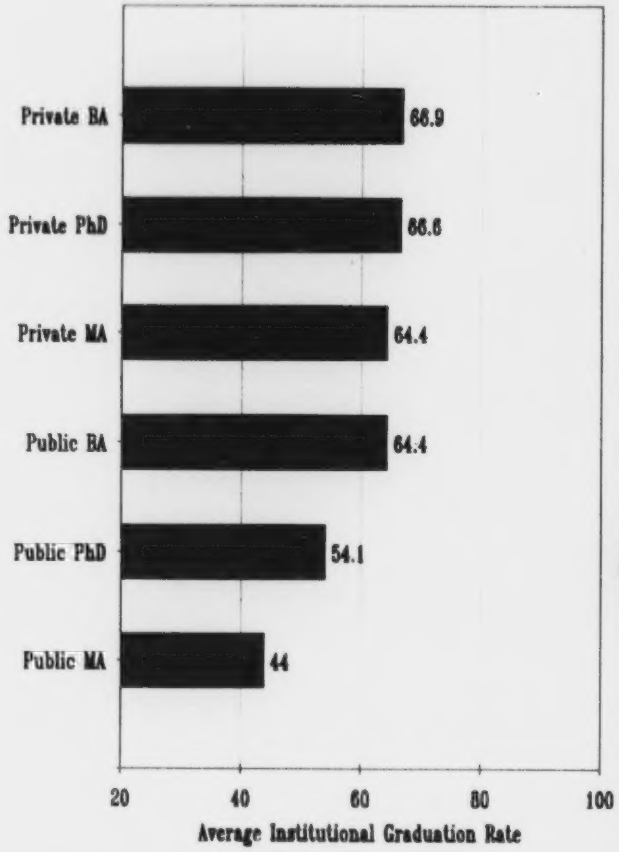
In 1995, the average institutional graduation rate for the 1428 institutions that award the bachelor degree was 54.0 percent. Because this is an unweighted institutional average, including very large and very small institutions, this is not quite the same as saying that 54 percent of the freshmen who entered these institutions graduated within five years. But this percent is quite similar to the Census Bureau's data on bachelor's degree attainment for those who start college.

As shown in the chart on page 1 of this issue of OPPORTUNITY, institutional graduation rates are closely associated with academic selectivity. Those institutions that enroll a majority of their freshmen from the top 10 percent of the high school graduating class have the highest graduation rates, while the open admissions institutions that admit any high school graduate have graduation rates about half of the most selective institutions.

Institutional Graduation Rates for Highly Selective Institutions by Level and Control 1995



Institutional Graduation Rates for Selective Institutions by Level and Control 1995



This finding is precisely what one would expect because academic success in college is so highly correlated with previous academic success. Students who were academically successful in high school are likely to be successful in college as well. Those institutions that enroll these most successful high school graduates should be expected to also have high institutional graduation rates. (College guide books: Are you listening?)

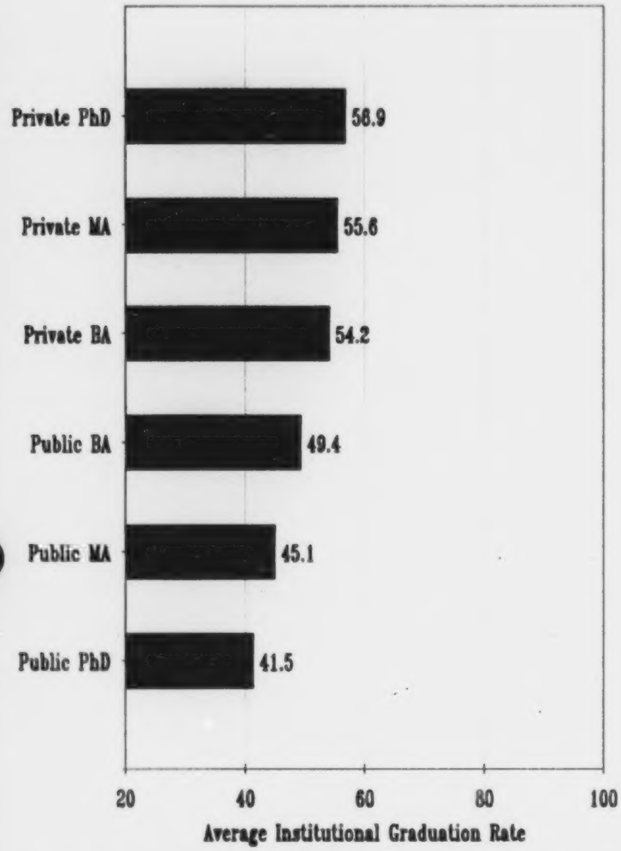
When institutional graduation rates are averaged for public and private institutions by academic selectivity, the results are shown in the chart on page 3. At every level of academic selectivity, private colleges and universities have higher average IGRs than do public institutions. These differences are generally greatest among the most selective institutions, and less--but still substantial--among the least selective institutions.

Finally, we have arrayed on these two pages the institutional graduation rates for institutions grouped by academic selectivity level: highly selective, selective, traditional and liberal. (The chart for open admissions schools is available on request.) Within each selectivity level are the average institutional graduation rates for six grouping of colleges and universities by control and highest degree awarded.

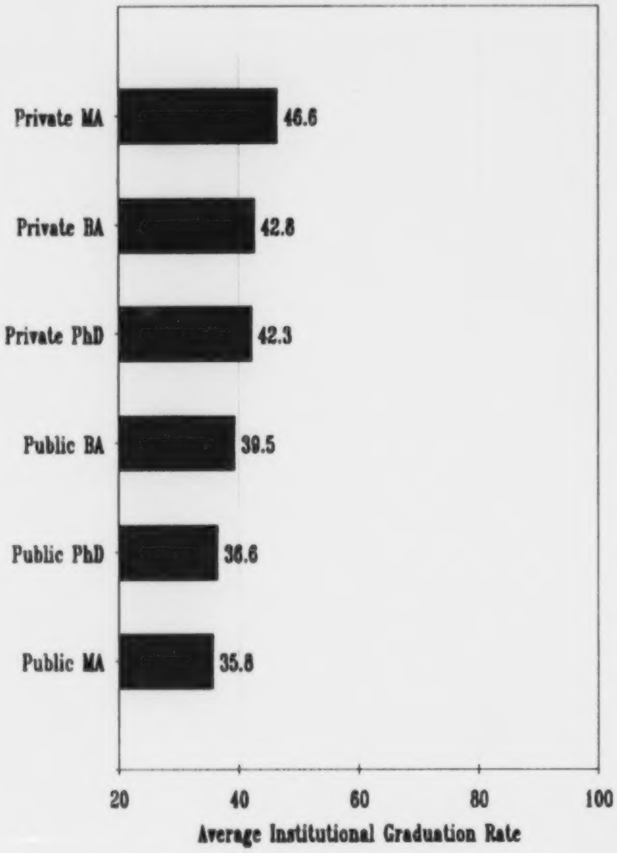
The patterns are important in this array of the four charts. First, IGRs are highest for all institutions with the most selective admissions policies, and lowest among all institutions with the least selective admissions policies. As one would expect, those students with the highest average high school class ranks boost the institutional graduation rates of the colleges and universities in which they enroll.

Second, at each level of academic selectivity, the private institutions have higher or equal IGRs compared to public institutions at the roughly same level. At the minimum, the far greater price students pay to attend private institutions does

Institutional Graduation Rates for Traditional Institutions by Level and Control 1995



Institutional Graduation Rates for Liberal Institutions by Level and Control 1995



not appear to impair their bachelor's degree attainment at private colleges and universities.

Standard Deviations

For each group of institutions--grouped by level, control and selectivity--we have reported average institutional graduation rates in the above charts. These IGRs are averages of sometimes widely varying IGRs within each group. The standard deviations of these means describe this variation, and the variation indicates that some institutions drawing from a similar range of high school graduate class ranks graduate those they admit at higher rates than do other institutions. This difference is not unimportant: clearly some institutions provide more supportive environments for student success than do other institutions. We will not address this issue here, but a study is underway at OPPORTUNITY that will.

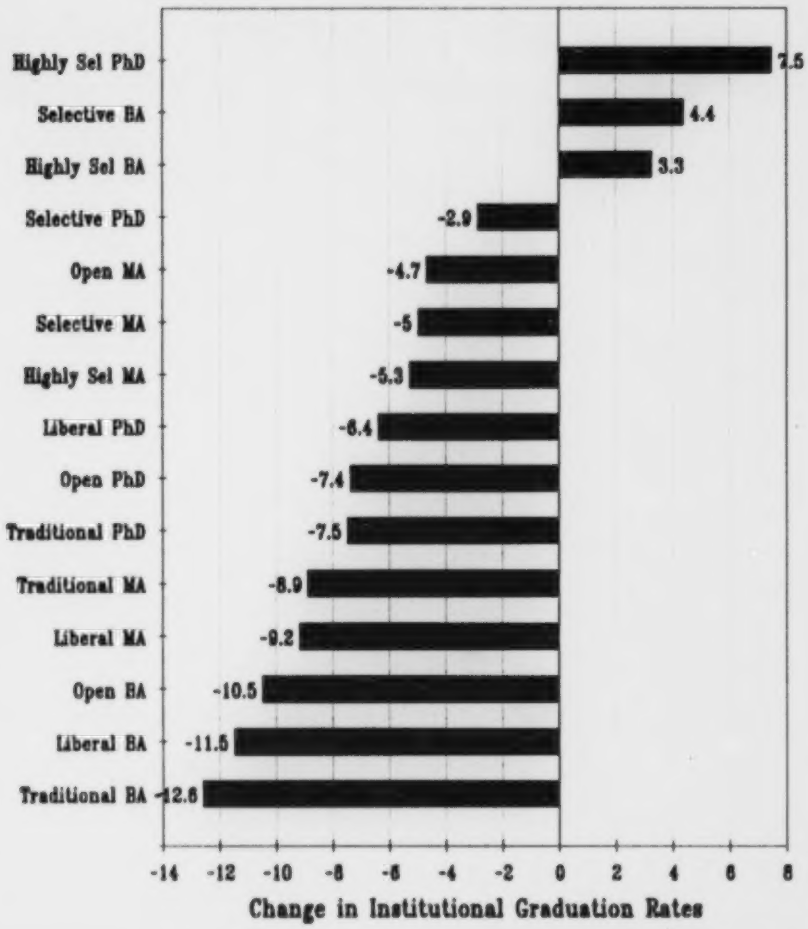
The weighted mean of the standard deviations by academic selectivity and control in 1995 were as follows:

	Public	Private
Highly selective	12.2	9.4
Selective	16.6	12.3
Traditional	13.8	15.1
Liberal	15.3	18.8
Open	15.2	17.8

These mean SDs are clearly large compared to the smaller differences between the average IGRs between public and private institutions. Thus, at the same level of academic selectivity, some or maybe many public institutions will have higher institutional graduation rates than will private institutions. The IGR edge enjoyed by private institutions is not shared by all.

Moreover, these standard deviations reflect wide ranges in institutional graduation rates when all three factors--level, control and selectivity--are simultaneously controlled. This

Change in Institutional Graduation Rates in Public Institutions by Level and Selectivity 1985 to 1995



suggests that other factors, not measured here, are influencing institutional graduation rates.

Change in Public Institutional Graduation Rates

The ACT Institutional Data Questionnaire has collected data on institutional graduation rates since 1983. This relatively long time series offers a unique opportunity to examine changes over time. Moreover, since these data are available by level, control and selectivity, some especially significant insights are possible.

The above chart summarizes changes in IGRs for public institutions by academic selectivity and highest degree awarded between 1985 and 1995. Average IGRs increased in three groups of public institutions, and decreased in twelve groups.

We have *estimated* the change in institutional graduation rates for all public institutions between 1985 and 1995. We *estimate* that the average five-year IGR for bachelor degree recipients at all public institutions that award the degree declined by 5.0 percent, from 51.1 percent in 1985 to 46.1 percent by 1995.

This decline did not occur at all levels of academic selectivity, as shown in the following table. IGRs actually increased in the highly selective public institutions, while the decline was greatest in least selective public colleges and universities.

	1985	1995	Change
Highly Sel	67.0	72.4	+5.4
Selective	54.5	51.0	-3.5
Traditional	53.2	44.1	-9.1
Liberal	45.4	36.7	-8.7
Open	43.5	36.7	-6.8
Total	51.1	46.1	-5.0

A sidelight to this calculation is worth noting. The distribution of public institutions that award the bachelor's degree became more selective between 1985 and 1995. The distribution of the 405 participating public institutions in 1985, and 434 institutions in 1995, is shown below:

	1985	1995
Highly Sel	7.2%	6.7%
Selective	20.0%	27.6%
Traditional	35.1%	41.2%
Liberal	19.3%	14.1%
Open	18.5%	10.4%
Total	100.1%	100.0%

Change in Private Institutional Graduation Rates

The chart on the following page summarizes changes in institutional graduation rates between 1985 and 1995 in private colleges and universities that award the bachelor's degree. Average IGRs increased in six groups of private institutions, and decreased in nine groups.

For all private institutions, the average institutional graduation rate increased between 1985 and 1995 by 0.4 percent, from 57.1 to 57.5 percent.

This slight increase masks greater changes in IGRs in private institutions that recruit their freshmen classes from different portions of the high school class of seniors. The pattern evident in the data for public institutions is shown here also. The rate at which freshmen admitted to the most selective institutions receive their bachelor's degrees within five years of entering the institution increased. For less selective institutions, however, this rate decreased between 1985 and 1995.

	1985	1995	Change
Highly Sel	79.5	82.8	+3.3
Selective	61.2	65.6	+3.4
Traditional	57.9	55.2	-2.7
Liberal	47.5	44.1	-3.4
Open	45.5	40.7	-4.8
Total	57.1	57.5	+0.4

Unlike the number of public institutions participating in the ACT Institutional Data Questionnaire survey, which increased by 29 institutions between 1985 and 1995, the number of private institutions decreased by 18, from 1012 to 994. These are private institutions that award the bachelor's degree.

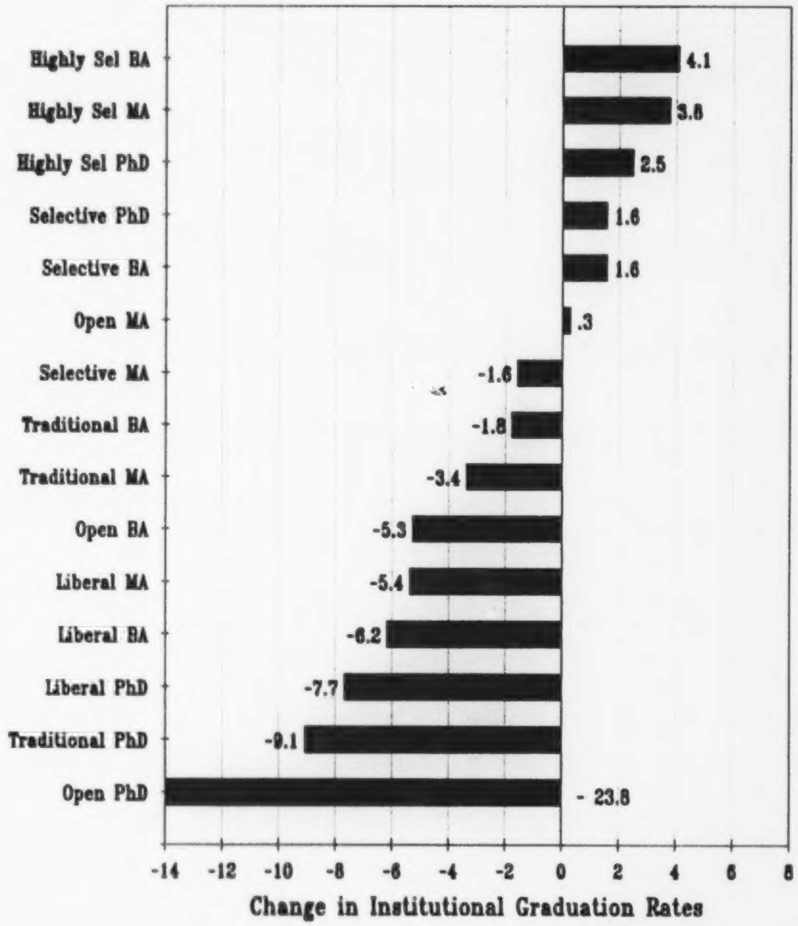
Again as in the public institutions, we note that the distribution of private colleges and universities that award the bachelor's degree grew more selective between 1985 and 1995. The distribution of the private institutions by academic selectivity was:

	1985	1995
Highly Sel	7.6%	8.9%
Selective	21.8%	26.7%
Traditional	41.3%	40.3%
Liberal	20.8%	17.0%
Open	8.4%	7.1%
Total	99.9%	100.0%

Changes in Combined Institutional Graduation Rates

In other data reported in OPPORTUNITY (e.g. November 1995), we have reported that baccalaureate degree attainment by age 24 was increasing for those from the top quartile of family income (above about $68,000), and decreasing for students from the bottom three-quarters of the family income distribution. These data appear to confirm this early finding.

Change in Institutional Graduation Rates
in Private Institutions by Level and Selectivity
1985 to 1995



First, the proportion of both public and private 4-year colleges and universities that draw most of their students from the bottom three-quarters of the high school graduating class appears to have declined between 1985 and 1995. In both sectors a smaller share of these institutions practice liberal or open admissions, and a growing share practice selective or highly selective admissions. Because of the high correlation between family income and academic measures such as high school class rank, it appears that 4-year colleges are drawing a growing share of their enrollments from the top quartile of family income and a declining share from the bottom three-quarters.

Second, institutional graduation rates are increasing for those institutions that practice the most selective admissions (and enroll students from the most affluent families). IGRs are decreasing in those institutions that enroll freshmen under the traditional, liberal and open admissions policies, and that thereby serve students from middle and lower family income backgrounds.

By combining the public and private institutions grouped by admissions selectivity, the changes in IGRs are the following:

	1985	1995	Change
Highly Sel	76.1	80.2	+4.1
Selective	59.4	61.0	+1.6
Traditional	56.7	51.8	-4.9
Liberal	46.9	42.1	-4.8
Open	44.6	39.1	-5.5
Total	55.4	54.0	-1.4

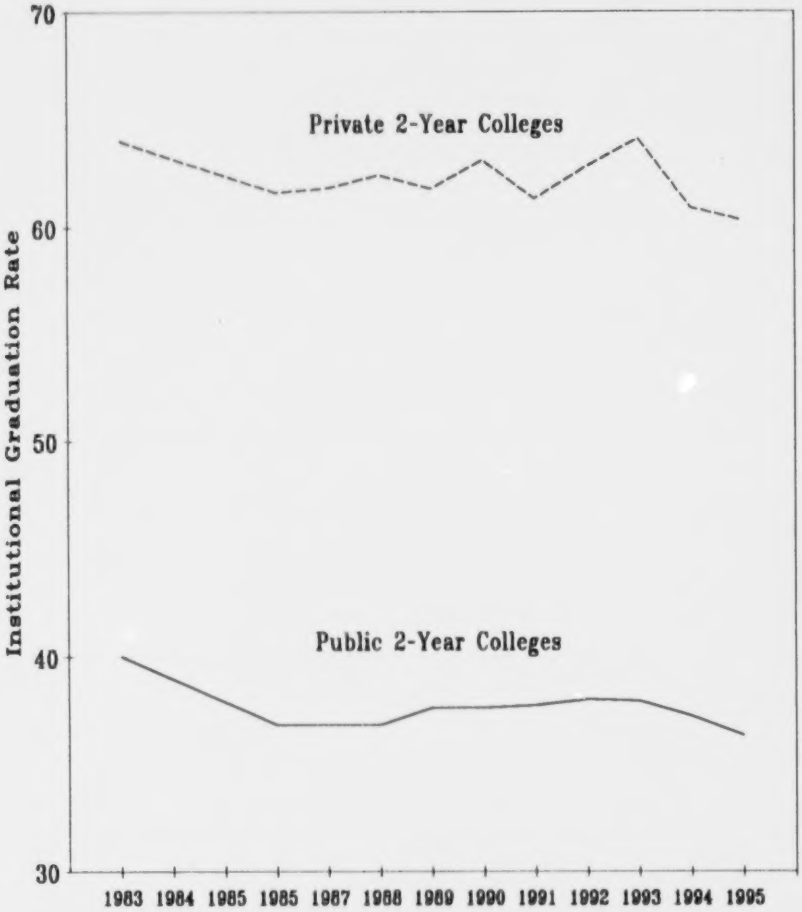
Over the last decade, both public and private 4-year colleges and universities appear to be moving away from enrolling students from low and middle income family backgrounds, and instead enrolling more of the most academically able high school graduates. Moreover, institutional graduation rates are being reallocated, increasing for the most selective institutions and decreasing for less selective institutions. The combined effects provide strong evidence that baccalaureate graduation rates within five years of entering college are increasing for those from the top quartile of family income, and decreasing for those from middle and low income families.

Two-Year Colleges

ACT's Institutional Data Questionnaire also collects data on graduation rates in institutions that award associate's degrees. Here, ACT collects graduation rate data at three years following admission.

In the 1995 IDQ file there are 1016 such institutions, 834 public and 182 private. None of these institutions identify themselves as highly selective. In 1995 809 identified themselves as open admission, and another 147 as liberal in admissions policies.

Institutional Graduation Rates
for Institutions that Award the Associate Degree
1983 to 1995



The chart on this page shows institutional graduation rates in these private and public institutions between 1983 and 1995. The most obvious findings are:

- Institutional graduation rates in private 2-year colleges averaged about 60 percent, compared to about 36 percent in public colleges.
- For both private and public institutions, IGRs have been trending downward. This trend is especially noticeable between 1993 and 1995, and in both sectors IGRs were lower in 1995 than they had been at any time since 1983 when data were first reported.

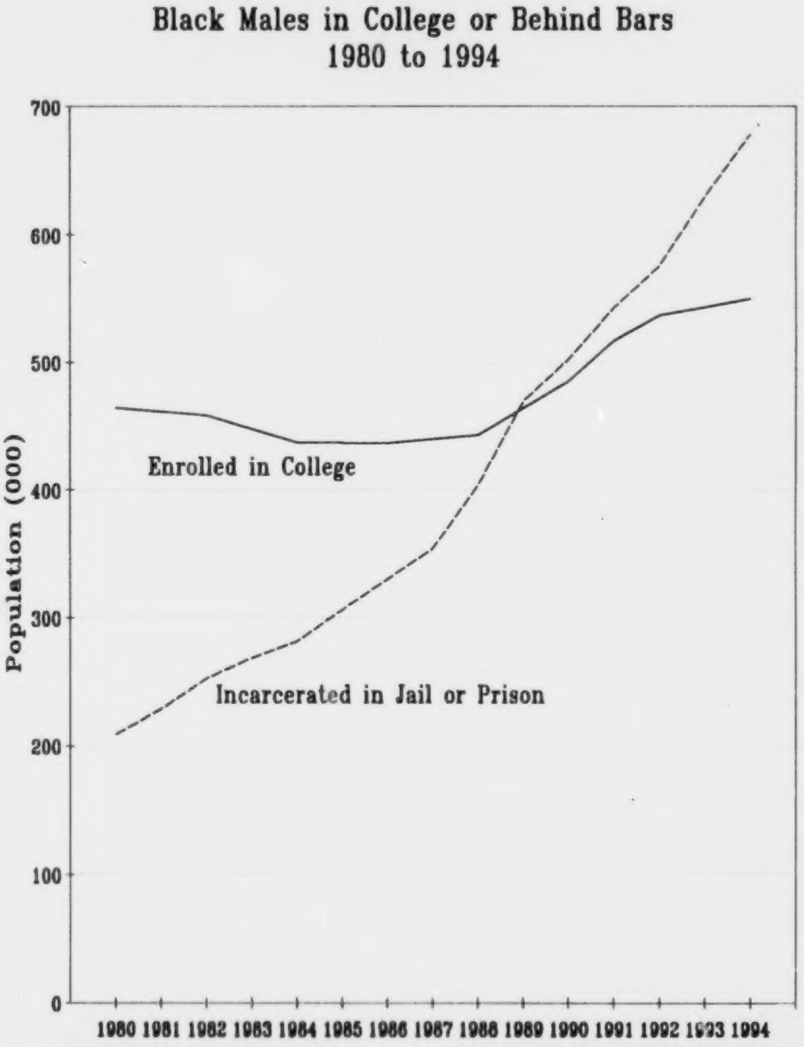
The standard deviations of the mean IGRs for both public and private 2-year colleges are large--generally between 17 to 26--thus indicating some institutions in both groups have graduation rates similar to 4-year institutions at the same academic selectivity level.

Black Males in College or Behind Bars in the United States, 1980 to 1994

According to the Bureau of Justice Statistics, in 1994 there were about 678,300 black males behind bars in federal and state prisons and local jails. At the same time, according to the National Center for Education Statistics, there were 549,600 black males enrolled in higher education.

Since 1980, Americans have shown a great deal more enthusiasm for locking up black males--including heavily investing in their incarceration--than they have in supporting their higher education to equip black males for productive, independent, socially responsible adult lives.

Here we juxtapose two sets of data on black males: incarcerated prisoners and enrolled college students. We examine these data over time and across the states. What we find in these data is simply horrific: America has become a very troublesome place for young black males. This pattern is sharply deteriorating with social policy strongly directed toward more incarceration and less higher education.



Black Males in College or Behind Bars
1980 to 1994

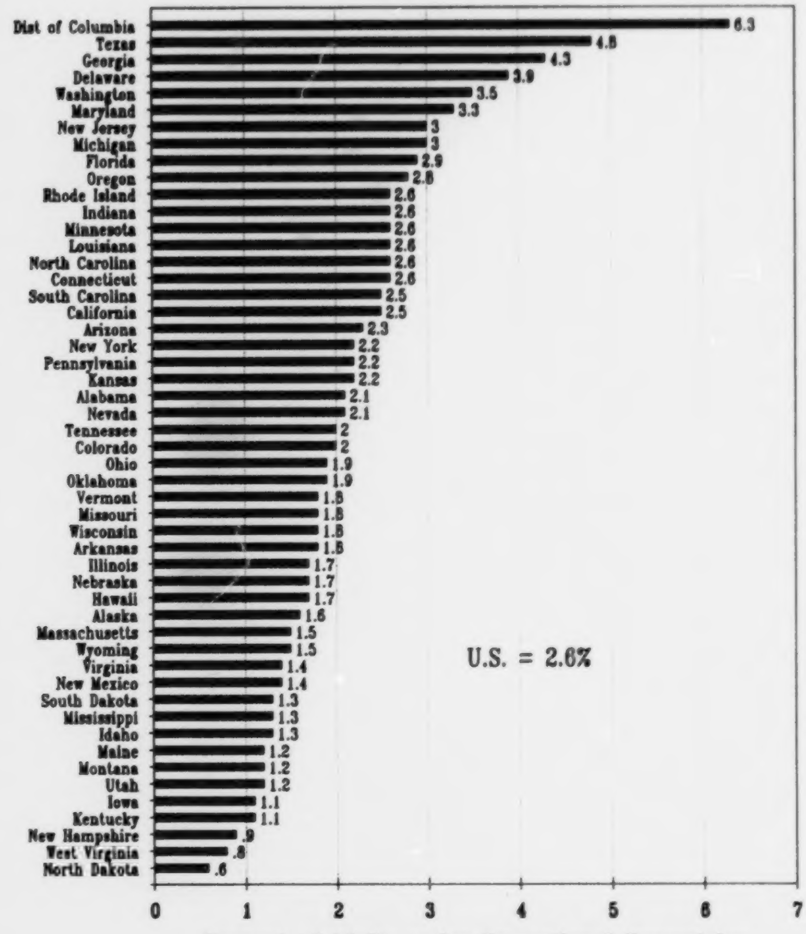
Despite this generally bleak overall view, across the states the prospects for young black males are far brighter in some states than they are in other states. It is this glimmer of success--those states where there are substantially more black males in college than there are behind bars--that contrasts so starkly with other states that put many more black males behind bars than they enroll in college. Some states appear to be committed more to the higher education of their young black male residents. Other states appear to have written-off young black males, their futures, their families, and the contributions that could have been made to the prosperity and welfare of the state. Instead, these states put more young black males behind bars than they enroll in their higher education systems.

The Data

In this analysis we use data on prisoners in federal prisons, state prisons and local jails collected and reported by the U.S. Department of Justice' Bureau of Justice Statistics. For comparison we use data on black male enrollments in higher education gathered and reported by the National Center for Education Statistics.

The incarcerated population data is reported in frequent and highly informative *Bulletins* from the Bureau

Adult Population under Correctional Supervision
1993



Percent of Adults under Correctional Supervision

of Justice Statistics. These briefs cover many criminal justice topics. To be added to the BJS mailing list for these publications, call 800-732-3277. The data on jail inmates and federal and state prison populations appear in annual statistical digests.

Snell T. L. (October 1995.) *Correctional Populations in the United States, 1993.* NCJ-156241. U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.

The college enrollment data are collected by the National Center for Education Statistics through the Integrated Postsecondary Education Data System (IPEDS). The higher education enrollment data used here were reported in the current and past versions of:

Snyder, T. D., and Hoffman, C. (October 1995.) *Digest of Education Statistics 1995.* NCES 95-029. U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics.

In addition, the state-specific data on higher education enrollment of black males was provided by unpublished special tabulation by Sam Barbette of NCES.

Correctional Supervision

Within the criminal justice system, an individual can be under one of several categories of correctional supervision. These categories include: probation, jail, prison, or parole. The groups behind bars--those who are incarcerated--include jail and prison, and prisons are operated by the federal and state governments.

In 1993 4.9 million Americans were under correctional supervision, or 2.6 percent of the 190.8 million Americans age 18 and over. The range was from 6.3 percent in the **District of Columbia**, to 0.6 percent in **North Dakota**. Among males, 4.6 percent were under correctional supervision, compared to 0.7 percent for females. By race, 1.8 percent of whites were under correctional supervision, compared to 9.1 percent for blacks and 0.8 percent for those of other race.

Blacks Behind Bars

In 1994 there were about 483,000 black males in state and federal prisons, and another 195,000 black males in local jails in the United States. The total--678,300--was up from 502,600 in 1990 and 208,700 in 1980. Between 1980 and 1994, the number of black males increased by 469,600, or by 225 percent.

In 1994 there were 549,600 black males enrolled in higher education. About 91.9 percent were undergraduates, 6.5 percent were graduate students, and 1.6 percent were first professional students. Between 1980 and 1994, the number of black males enrolled in higher education increased by 85,900, or by 19 percent.

Expressed another way, for each black male added to the higher education system, about six black males were added to the prison and jail population in the United States.

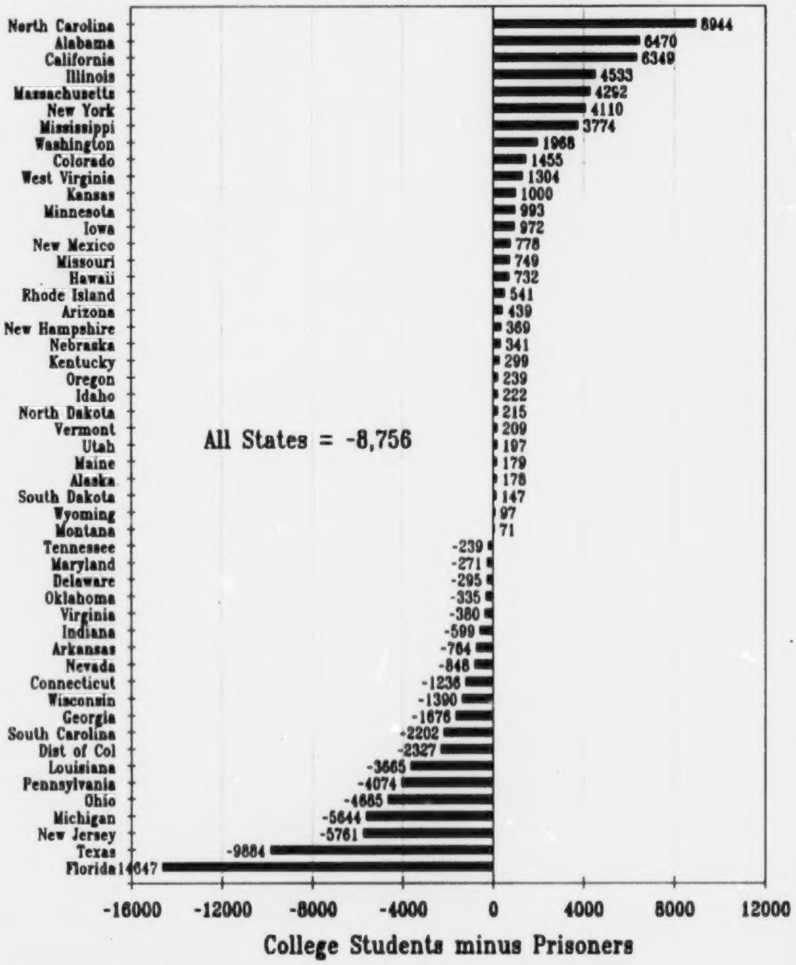
State Comparisons

As appalling as these data are nationally, the picture for black males varies substantially between the states.

In some states there are substantially more black males in state prisons and local jails than there are enrolled in colleges and universities. The reverse is true in other states.

These data are shown in the chart on this page. At one extreme, in North Carolina, there 13,288 black males in state prisons, plus another 4,749 in jails, for a total of 18,037 behind bars. In contrast there were 26,981 black males enrolled in colleges and universities in North Carolina. Other states with substantially more black male college students than prisoners include **Alabama, California, Illinois, Massachusetts, New York** and **Mississippi**.

Black Males in College or Behind Bars by State
1993-94



Another way of looking at these data is to calculate the odds of being enrolled in college versus locked up in prison or jail. The ten states where a black male was more than twice as likely to be in college as behind bars are: **North Dakota** (11.2), **Maine** (6.3), **Hawaii** (5.8), **New Hampshire** (5.5), **Idaho** (4.8), **West Virginia** (3.8), **South Dakota** (3.2), **Montana** (2.8), **New Mexico** (2.6) and **Wyoming** (2.4).

At the other extreme are those states where black males are more likely to be behind bars than in college. **Florida** is the extreme case. It has 29,385 black males in state prisons, and another 14,656 in jails, for a total of 44,041 behind bars. In contrast, Florida has 29,394 black males enrolled in its colleges and universities. There are 14,647 more black males behind bars in Florida than there are enrolled in college.

Other states with more than 3000 more black males behind bars than in college include **Texas, New Jersey, Michigan, Ohio, Pennsylvania** and **Louisiana**. The states where a black male is more *likely* to be behind bars than in college are **Nevada, Florida, New Jersey, Michigan, Wisconsin, Connecticut** and **Texas.**

These data describe a devastating deterioration in the life prospects for young black males since 1980. But the direct cost consequences for the larger society are equally staggering. Social investment in public higher education was about $5237 per FTE student in FY1993. But incarceration expenditures were $14,667 per jail inmate in 1993, and state prison expenditures were $19,403 in 1992. Thus, society now spends about $2.8 billion to higher educate black males, and $10.0 billion to lock them up.

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Black Male Prisoners and College Students by State

State	State Prisoners (1993)	Jail Inmates (1993)	Total	College Students (1994)	Diff	Student/ Prisoner Ratio
Alabama	11,450	3,596	15,046	21,516	6,470	1.43
Alaska	313	0	313	491	178	1.57
Arizona	2,865	824	3,689	4,128	439	1.12
Arkansas	4,682	1,152	5,834	5,070	-764	0.87
California	36,461	12,354	48,815	55,164	6,349	1.13
Colorado	2,152	433	2,585	4,040	1,455	1.56
Connecticut	5,873	0	5,873	4,637	-1,236	0.79
Delaware	2,606	0	2,606	2,311	-295	0.89
Dist of Col	10,023	1,400	11,423	9,096	-2,327	0.80
Florida	29,385	14,656	44,041	29,394	-14,647	0.67
Georgia	17,713	11,795	29,508	27,832	-1,676	0.94
Hawaii	152	0	152	884	732	5.82
Idaho	47	12	59	281	222	4.76
Illinois	21,428	8,175	29,603	34,136	4,533	1.15
Indiana	5,565	1,522	7,087	6,488	-599	0.92
Iowa	1,121	282	1,403	2,375	972	1.69
Kansas	2,099	714	2,813	3,813	1,000	1.36
Kentucky	3,275	1,647	4,922	5,221	299	1.06
Louisiana	16,424	5,876	22,300	18,635	-3,665	0.84
Maine	34	0	34	213	179	6.26
Maryland	14,816	5,616	20,432	20,161	-271	0.99
Massachusetts	2,883	2,145	5,028	9,320	4,292	1.85
Michigan	21,026	4,253	25,279	19,635	-5,644	0.78
Minnesota	1,335	727	2,062	3,055	993	1.48
Mississippi	6,945	2,436	9,381	13,155	3,774	1.40
Missouri	7,284	2,007	9,291	10,040	749	1.08
Montana	27	12	39	110	71	2.82
Nebraska	796	382	1,178	1,519	341	1.29
Nevada	1,709	552	2,261	1,413	-848	0.62
New Hampshire	73	10	83	452	369	5.45
New Jersey	14,885	5,249	20,134	14,373	-5,761	0.71
New Mexico	367	129	496	1,274	778	2.57
New York	33,221	11,036	44,257	48,367	4,110	1.09
North Carolina	13,288	4,749	18,037	26,981	8,944	1.50
North Dakota	12	9	21	236	215	11.24
Ohio	20,665	3,134	23,799	19,114	-4,685	0.80
Oklahoma	5,066	1,007	6,073	5,738	-335	0.94
Oregon	817	354	1,171	1,410	239	1.20
Pennsylvania	14,068	7,788	21,856	17,782	-4,074	0.81
Rhode Island	835	0	835	1,376	541	1.65
South Carolina	12,151	3,056	15,207	13,005	-2,202	0.86
South Dakota	47	20	67	214	147	3.19
Tennessee	5,965	7,797	13,762	13,523	-239	0.98
Texas	29,260	18,436	47,696	37,812	-9,884	0.79
Utah	230	134	364	561	197	1.54
Vermont	0	0	0	209	209	0.00
Virginia	14,093	7,298	21,391	21,011	-380	0.98
Washington	2,096	1,164	3,260	5,228	1,968	1.60
West Virginia	257	203	460	1,764	1,304	3.83
Wisconsin	3,908	2,354	6,262	4,872	-1,390	0.78
Wyoming	53	18	71	168	97	2.37
Total	401,846	156,513	558,359	549,603	-8,756	0.98

Earnings of Mid-Career Bachelor's Degree Holders by Major Field of Study in 1993

By any measure college is a very expensive investment for students and their parents, probably ranking first or second in the lives of most persons. The investment decisions of individuals include questions of whether to attend college, where to enroll, what to study and for how long. Each of the choices within these decision sets carries a price tag, and each of these decisions involves perceptions of short-term consumption and long-term investment benefits that must be weighed against the anticipated costs. Informed choice is especially important where individuals seek to maximize the benefits gained from a college investment compared to costs incurred.

While college freshmen describe a variety of motivations for attending college, chief among them are the economic benefits of college:

- To get a better job
- To make more money

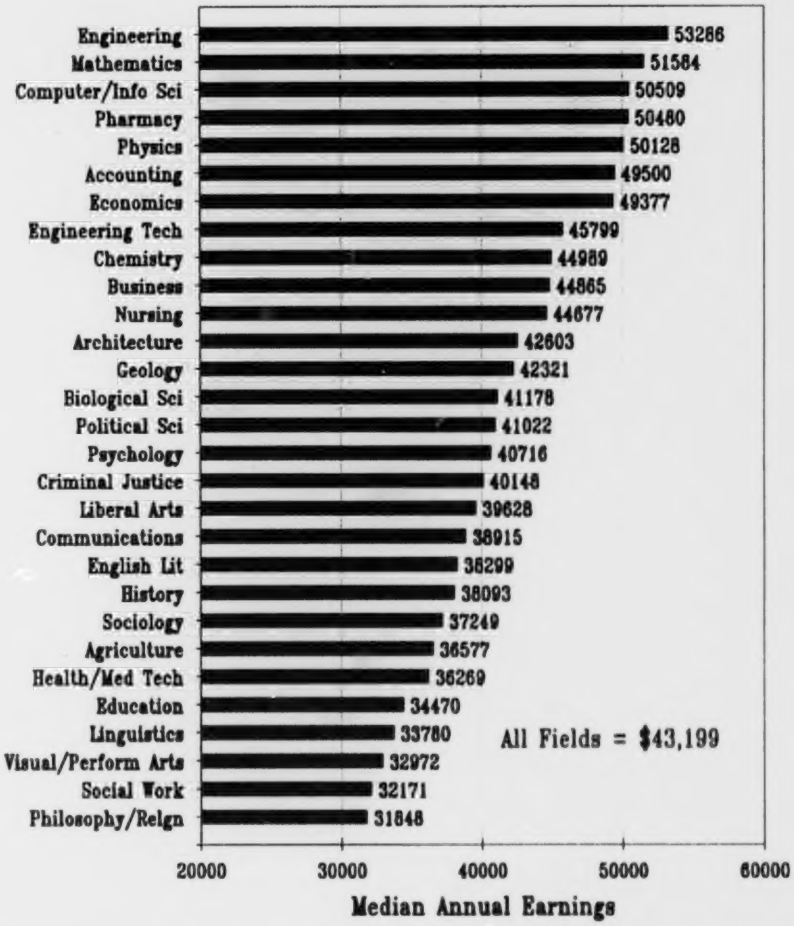
When these freshmen are asked why they have chosen the college where they are enrolled, again economic factors are important:

- Graduates get good jobs

Extensive research on student demand for higher education in the 1970s by Richard Freeman identified changing job markets for graduates in different fields of study as the principal cause of enrollment shifts between different academic fields.

Here we add to the extensive reporting in many previous issues of OPPORTUNITY on the economic value of college education in the labor market. In this case we reanalyze and summarize key findings from a recent study of earnings of bachelor's degree graduates between the ages to 25 and 64 by major field of study in college.

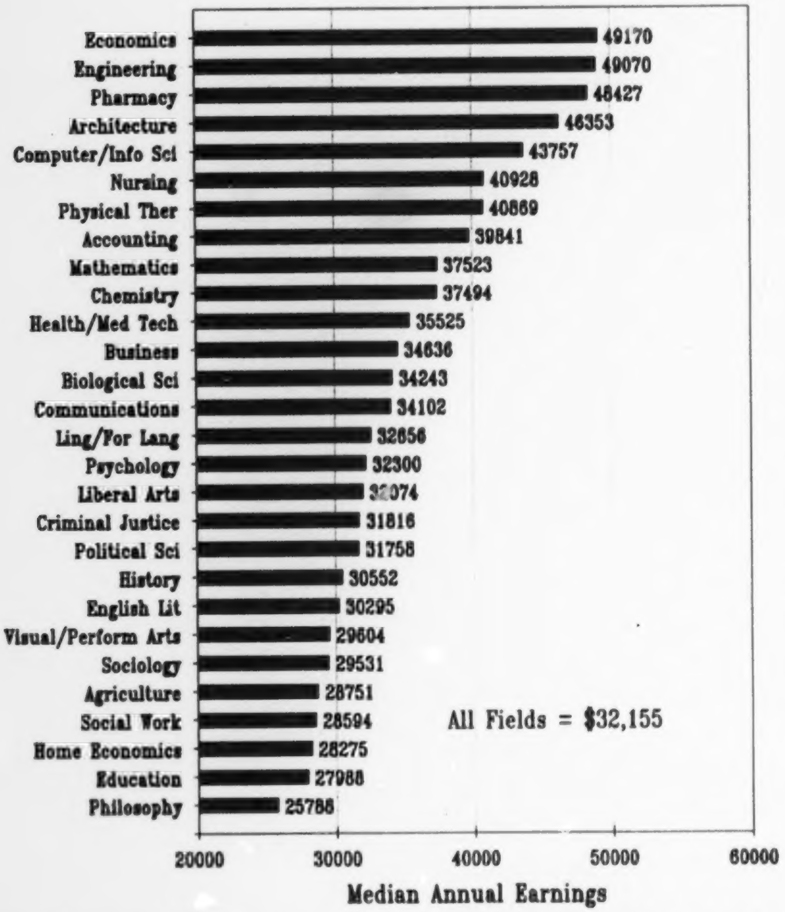
Median Annual Earnings of Male Bachelor's Degree Graduates
Ages 35 to 44 Years by Major Field of Study
1993



These data are unique in that they extend our understanding of what happens to the incomes of college graduates in specific fields of study over their 40 year working lifetime.

The findings from this analysis describe the earnings profiles well after the college graduate first enters the labor market with his or her newly minted bachelor's degree. These profiles suggest that differences in the starting salaries of college graduates from different fields of study persist through mid- and later career stages. These profiles also suggest that bachelor degree recipients have somewhat different profiles: for graduates in some fields, incomes continue to grow with age and experience, while growth is less apparent in other fields.

Median Annual Earnings of Female Bachelor's Degree Graduates Ages 35 to 44 Years by Major Field of Study 1993



Here we describe these profiles for men and women holding bachelor's degrees by fields of study.

The Data

The data reported here were tabulated by the Bureau of Labor Statistics from a National Science Foundation (NSF) survey conducted by the Census Bureau. In 1993 the NSF surveyed a large sample of persons (215,000) under age 75 who had reported that they had a bachelor's degree in the 1990 decennial census. The population from which this sample was drawn consisted of 12.8 million of the more than 20 million college graduates employed full-time in 1993 that reported having a college degree in the 1990 Census.

The NSF survey asked for major field of study, earnings and employment status, among other things. The results were later analyzed at the Bureau of Labor Statistics.

The data on earnings by major field of study for bachelor's degree holders was reported by major field of study, gender and age for those who were employed full-time in 1993. The three age groups were: 25 to 34 years (young), 35 to 44 years (midcareer), and 45 to 64 (older workers). In this analysis earning of workers over 64 years were excluded.

Earnings at Midcareer

The chart on the previous page shows median annual earnings for men working full-time with bachelor's degrees at midcareer. The median for all men was $43,199. The range was from $31,848 for men with majors in philosophy/religion/ theology, to $53,286 for men with majors in engineering.

The majors with the highest earnings included engineering, mathematics, computer and information sciences, economics and pharmacy. The majors with the lowest earnings included philosophy/religion/theology, social work, visual/performing arts, linguistics/foreign language/literature, and education.

The chart on this page shows median annual earnings for women at midcareer working full-time with bachelor's degrees. The median for all women was $32,155. The range for women was from $25,788 for women with majors in philosophy/ religion/theology, to $49,170 for women with physics majors. Generally, the higher and lower paying majors for men were similar to those for women.

Women with bachelor's degrees earned 74 percent of what men earned with similar degrees, also in midcareer, and also working full-time. However, much of this difference is attributable to differences in concentration in relatively high- or low-pay occupations.

Hecker, D. E. "Earnings of College Graduates, 1993. *Monthly Labor Review*. December 1995.

When the additional control of major field of study is added, across 26 major fields of study where data for both males and females are available, in only one case--mathematics--is the earnings differential less than 77 percent. These data are shown in the chart on this page. In one case--architecture--women earn more than men, and in another--economics--no practical difference exists. When controls for major field are added to the control for age and full-time employment already present, females with bachelor's degrees earn an average of about 86 percent of what males earn.

Earnings Profiles by Age

For men with bachelor's degrees, earnings tend to increase with age. This is barely true at all for women. That is, the earnings differential between college educated men and women starts relatively small among young workers and then widens as workers get older.

Among men with bachelor's degrees, median annual earnings in 1993 by age were as follows:

25 to 34 years	$35,694
35 to 44 years	$43,199
45 to 64 years	$49,390

Compared to a male 25 to 34 years, another male age 45 to 64 earned about 38 percent more in 1993.

Among women with bachelor's degrees, median annual earnings in 1993 by age were:

25 to 34 years	$29,660
35 to 44 years	$32,155
45 to 64 years	$32,093

Thus, between 25 to 34 years and 45 to 64 years, median annual earnings for these women increased by just 8 percent, or about one-fifth of the increase for men.

The earnings difference between men and women with bachelor's degrees clearly grows with age:

	Difference	% of Male
25 to 34	$6034	83.1%
35 to 44	$11,044	74.4%
45 to 64	$17,297	65.0%

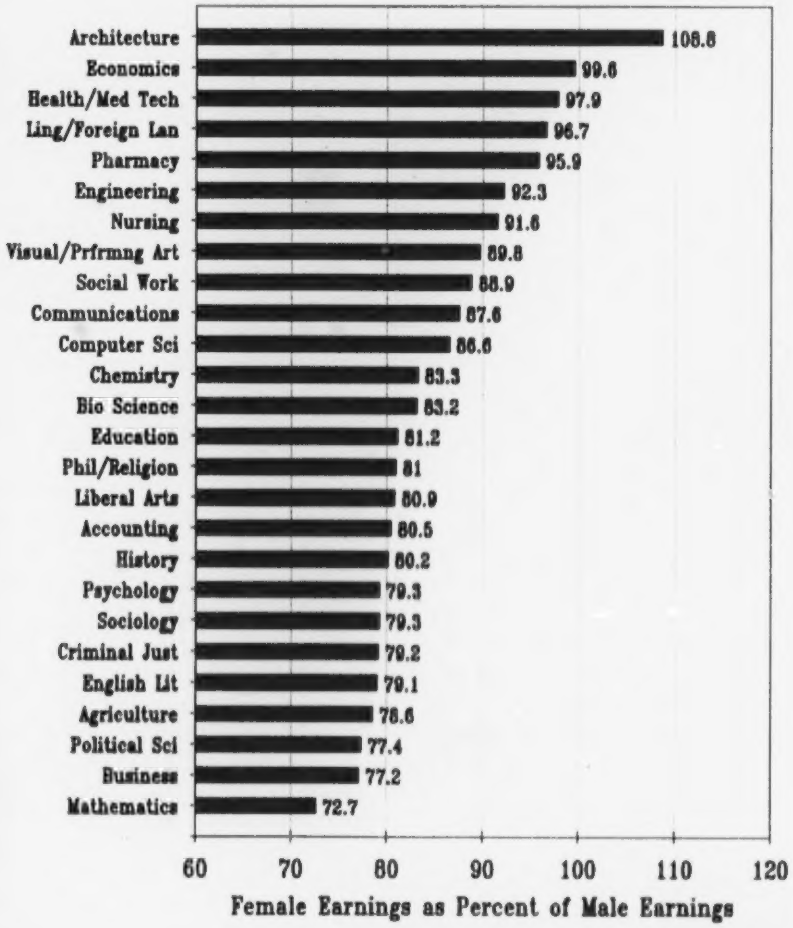
Summary

The NSF survey gathers unique data on earnings of those working full-time who have bachelor's degrees. The data include recipients by gender, age and major field of study.

By major field of study and age, for both men and women, earnings are comparatively higher with degrees in engineering, mathematics, computer and information sciences, economics and pharmacy. Earnings are comparatively lower with degrees in philosophy/religion/theology, social work, visual/performing arts, education, and linguistics/foreign language and literature.

Women earn substantially less than men, and this earnings gap grows with age. However, the size of the earnings gap depends heavily on the major field of study. In some fields women earn about what men earn.

Median Annual Earnings for Women Compared to Men with Bachelor's Degrees, Ages 35 to 44, Working Full-Time 1993



13th Annual NASSGAP/NCHELP Financial Aid Research Network Conference

April 10-12, 1996, Annapolis, Maryland

The annual national research conference on student financial aid will be held at Loews Annapolis Hotel in Annapolis, Maryland, on April 10-12. Conference attendees include representatives from state grant and loan agencies, federal agencies, postsecondary institutions, national organizations and others concerned with student financing of higher education.

Topics selected for presentation include:

- The impact of student aid on persistence in Washington higher education
- Institutional retention and student persistence: five-year rates of the 1989-90 entering class
- College debt and the American family
- Default prevention: profiling high-risk borrowers
- Student loan discharge through bankruptcy: a review
- Recent findings from the national evaluations of federal TRIO programs
- A review of state-funded access and retention programs in Massachusetts
- Symptoms of affordability problems in higher education
- How low income undergraduates finance postsecondary education
- Illinois undergraduate less-than-half-time enrollment study
- Effects of the 1992 Higher Education Amendments: evidence from the Pell Grant program data
- The decision not to use a Pell Grant: evidence from a survey of Pell program participants
- Determining net costs: what do students really pay for college?
- New York HESC default collectability: identifying defaulters who will voluntarily repay
- Differing student-institution fits among non-high school degreed postsecondary students
- Calculating the per-student cost of instruction at a public university system
- The 1994-95 California student expenses and resources survey
- The relationship between public college and university tuition prices, financial aid budgets, and access to public postsecondary education
- Using financial aid in Arizona to shift enrollments from public to private institutions

Information on conference registration may be obtained from:

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Director of Education and Student Loan Research
Sallie Mae - MDC #T4267
1050 Thomas Jefferson Street, NW
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Number 46 **Iowa City, Iowa** **April 1996**

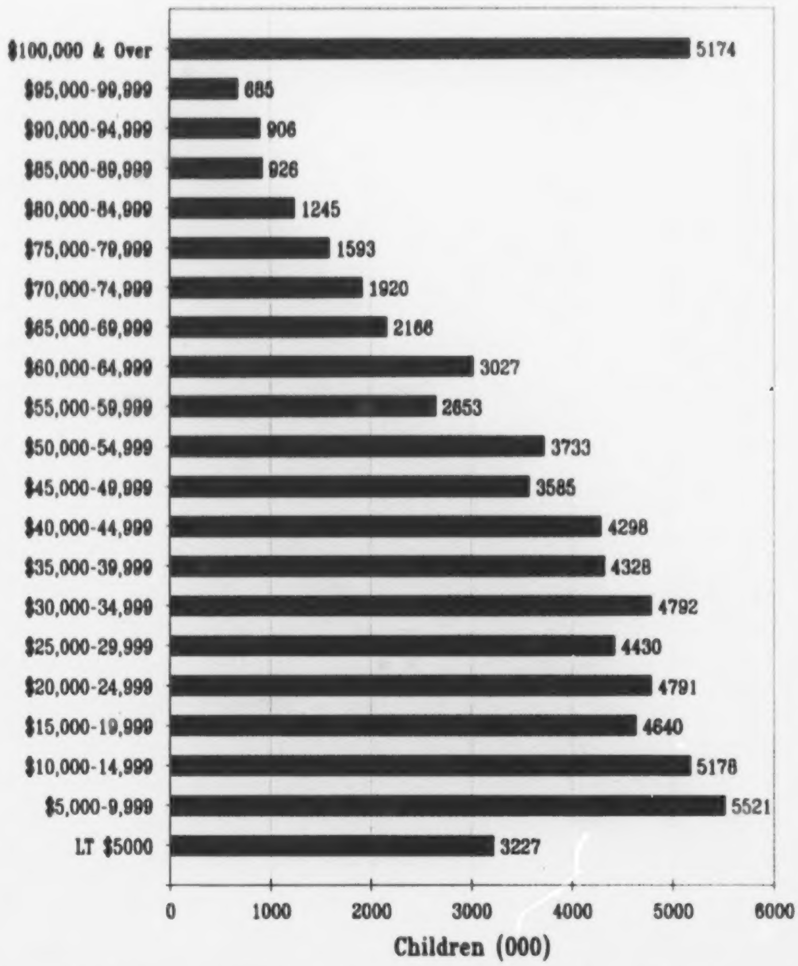
Affordable . . . *. . . to so few*

Children, Family Income and College Affordability

College affordability is an issue that affects a wide and widening swath of American families. Since 1979, as the costs of higher education have been shifted from taxpayers to students and their families, and family incomes have stagnated or declined, college affordability has become an issue to an ever larger proportion of families with children.

Consider these four starkly simple facts:

- *For 1995-96, an academic year of the least expensive college education in America averaged $5752 at a public community college, according to The College Board.*
- *The expected parental contribution from income of $5752 for a dependent student from a family of four with one in college corresponds to a parental income of about $53,000 for 1995-96 under the Federal Methodology.*
- *According to unpublished 1994 income data on families with children collected by the Census Bureau, 67 percent of all families with children have incomes of less than $53,000 per year.*
- *According to these same Census Bureau data, about 69 percent of all children live in these families with incomes below $53,000 per year.*



Children by Family Income Levels
1994

In this analysis we update a previous study of the 1992 income data for families with children. That study appeared in the January 1994 issue of OPPORTUNITY (#19). This update was suggested by Christine Crenshaw, Director of Student Financial Aid for the Kansas Board of Regents. The 1994 data only became available in the last few weeks to update the original analysis.

In addition, John Anderson of California Polytechnic State University has suggested that these data offer a way for public and institutional policy to preserve commitments to socio-economic diversity while racially-based admissions and financial aid programs are under assault. In California and elsewhere, while race-based policies are in retreat, some people are coming to realize that policy goals of student body diversity can still be achieved by focusing on social class measures such as family income.

In fact, this entire issue of OPPORTUNITY is devoted to different studies of family income and college affordability. Just as family resources are the foundation of need-tested eligibility for student financial aid, understanding what is happening to families and their resources is essential to designing, funding and administering programs that seek to achieve public policy aims to foster opportunities for postsecondary education and training for all Americans. This issue has been planned with this objective in mind.

The Data

In this analysis two data sets are juxtaposed with need analysis to assess college affordability for families with children.

The first data set is the unpublished Census Bureau tabulation of families with children by income level from the March 1995 Current Population Survey (CPS). The income data are for CY1994.

Data on families are tabulated by race (white, black and Hispanic), parental status (married couples, male householder/no wife present, and female householder/no husband present), and income. We have pushed these tabulated data especially hard to glean additional important insights from the data that are not apparent in the standard Census tabulations from the CPS. For example, although data are reported for whites, blacks and Hispanics, we have recalculated the published data for distinct groups of Anglos (non-Hispanic whites), blacks, Asians and Hispanics.

More ominously, these data were last published for sale in print form in 1993:

U.S. Bureau of the Census. Current Population Reports, Series P60-184. *Money Income of Households, Families and Persons in the United States: 1992.* U.S. Government Printing Office, Washington, DC, 1993.

Due to reductions in Census Bureau funding, only highly abbreviated reports are now published in the P-60 series. These shortened reports do not include the key tabulations used in this analysis. Instead, one must personally call the Income Statistics Branch, Housing and Household Economics Statistics Division of the Census Bureau, at (301)763-8576 (speak to Carmen DeNavas) to request a copy of the most recent version of Table 8 from the above discontinued report. The order will set you back $10, even if you are a paid subscriber to the P-60 series (as is OPPORTUNITY). Times are tough at the Census Bureau too.

The second data set used in this analysis is college attendance costs for the 1995-96 academic year as collected by The College Board. We have used the undergraduate college costs for institutions by type and control as published in *The Chronicle of Higher Education* for October 6, 1995, page

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Mission Statement
This research letter is founded on two fundamental beliefs. First, sound public social policy requires accurate, current, independent, and focused information on the human condition. Second, education is essential to the development of human potential and resources for both private and public benefit. Therefore, the purpose of this research letter is to inform those who formulate, fund, and administer public policy and programs about the condition of and influences that affect postsecondary education opportunity for all Americans.

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A37. Historical data in this series is also published by The College Board in its annual *Trends in Student Aid* and in other publications.

Finally, our financial aid calculator is the New York State Higher Education Services Corporation's ABLE-2 software. By entering parental income and family size information we derived expected parental contributions from income under the Federal Methodology that are compared to college attendance costs from The College Board in this analysis.

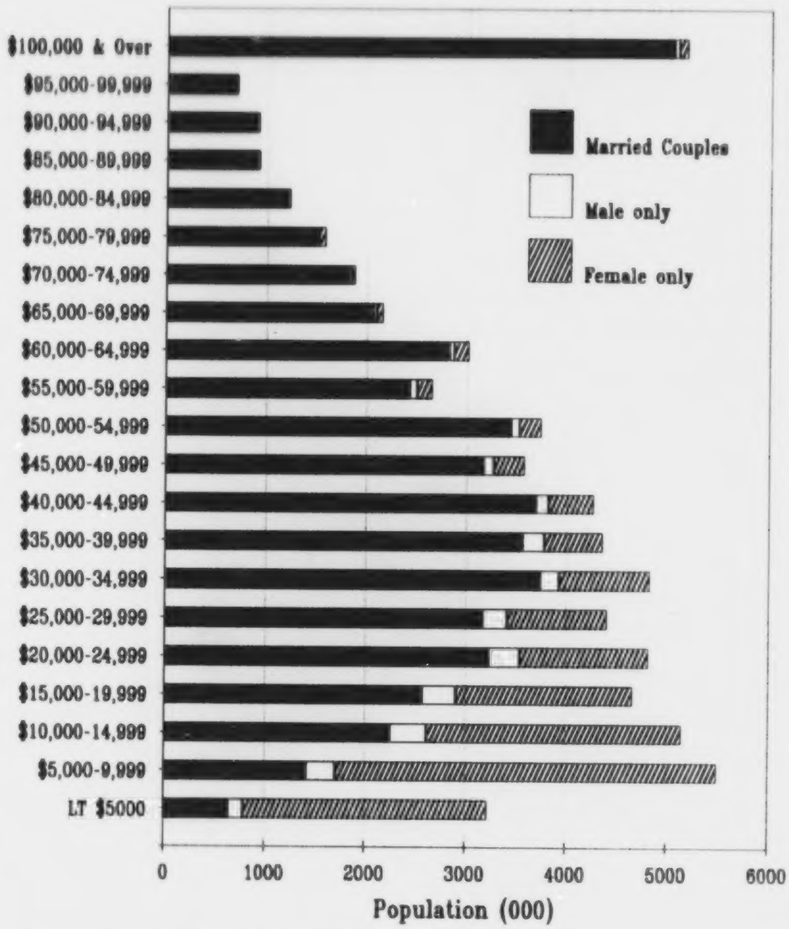
Children by Family Income

In March of 1995, the Census Bureau's Current Population Survey found approximately 68.6 million children (ages 0 through 17) living in 36.8 million families. This compares to 65.4 million children living in 35.5 million families two years earlier.

The median family income for families with children was $37,925, and the mean was $47,866.

The children in these families are distributed across family income levels as shown in the chart on page 1 of this issue of OPPORTUNITY. This distribution is highly skewed toward lower family income ranges, and the skew helps explain the large difference between the mean and median incomes of families with children. Over 5 million children lived in families earning more than $100,000 per year. But more than that number lived in families earning between $5000 and $10,000 per year too.

Children by Family Income Levels
and Family Type
1994



Family Type

Families are defined as two or more people living together who are related by blood or marriage. These tabulations refer to children living with parents to whom they are related.

Families are of three types: married couples, male householder with no wife present, and female householder with no husband present.

In March of 1995, the number of families and the number of children living in families of these three types were:

	Families	Children
Married	26,367	50,094
Male	1,750	2,744
Female	8,665	15,886

In 1994 the median family income for families with children was $37,925, compared to $39,653 for families without children.

Of those families with children, median family incomes by family type were:

Married	$47,244
Male householder only	$24,092
Female householder only	$14,902

Race and Ethnicity

The Census Bureau reports data on incomes of families with children for all families, whites, blacks and Hispanics. The white/black/Hispanic classifications are neither all-inclusive (because "Other race," mainly Asian but including American Indian are not reported separately), nor discreet (because Hispanics, who are mainly white, may be of any race). Therefore, we have reworked the Census Bureau data into four classifications:

- **Anglos**, who are non-Hispanic whites,
- **Blacks**,
- **Hispanics**, who are assumed for this purpose to all be whites by race, and
- **Other race**, who are mainly Asians but this group also includes American Indians.

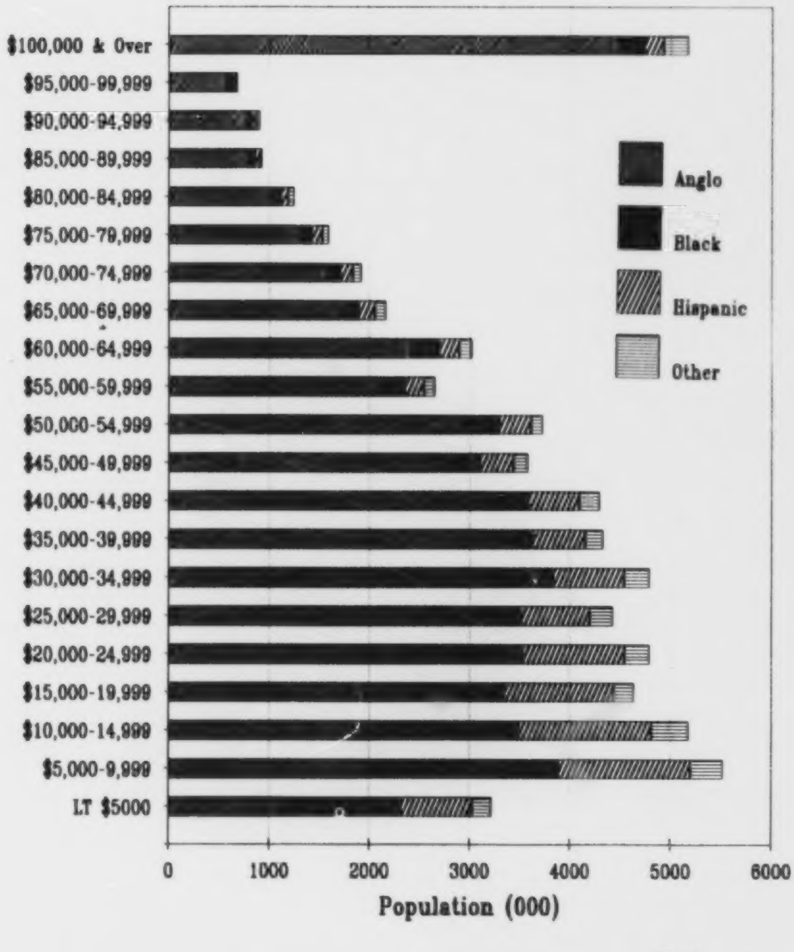
By our recalculation of the Census Bureau data, the population of children was as follows in March of 1995 (thousands):

Anglo	44,678
Black	10,764
Hispanic	9,675
Other race	3,503

The distribution of these children by their family incomes is shown in the chart on this page. Clearly, Anglo children are living at generally far higher levels of family income than are children in black or Hispanic families. We have calculated median family incomes for children in these racial/ethnic groups for 1994 as follows:

Anglo	$44,498
Black	$19,314
Hispanic	$21,992
Other race	$33,317

Children by Family Income Levels
and Race/Ethnicity
1994



Expressed another way, median family income for children of other race was 75 percent of that of Anglo children. Median income for Hispanic children was 49 percent of that of Anglo children. Median family income for black children was 43 percent of that for Anglo children.

Between 1992 and 1994, median family income for Anglo children increased $1587, by $2333 for black children and by $260 for Hispanic children. However, median family income for children of other race decreased by $3281 during this same period.

These disparities in the incomes of families with children from these four racial/ethnic groups may be illustrated in another way. We may compare the distribution of children from different racial/ethnic backgrounds at any given level of family income. For example:

- At $5000 to $9999 of family income, the racial/ethnic distribution of children is 35 percent Anglo, 36 percent black, 24 percent Hispanic and 6 percent other race.
- At 50,000 to $54,999 family income, the distribution is 79 percent Anglo, 10 percent black, 8 percent Hispanic and 3 percent other race.
- At $100,000 and over, the distribution is 87 percent Anglo, 5 percent black, 5 percent other race, and 4 percent Hispanic.

These data suggest that minority children are concentrated among poverty-level families. Data for 1993 from the Census Bureau, reworked to our complete and discreet classifications, make this clear. The poverty rates for children were:

Anglos	13.5%
Black	46.1%
Hispanic	40.9%
Other race	24.1%

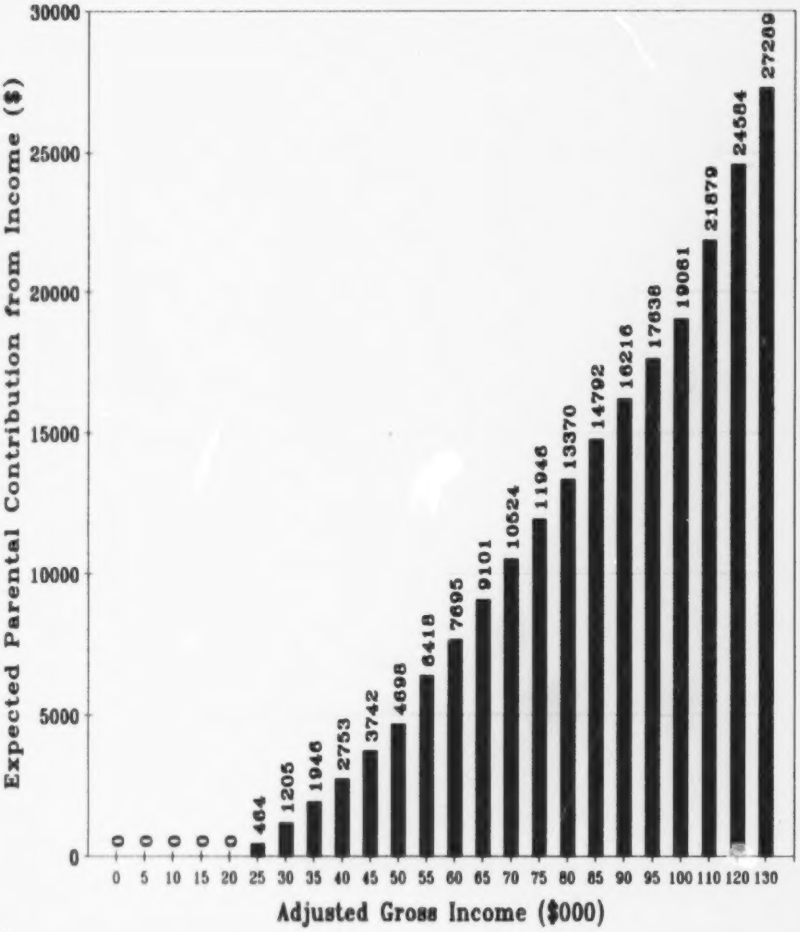
Family Income and Expected Ability to Pay for College

To this point in this analysis, we have sought to illustrate the very wide distribution of American children across levels of family income. The Census Bureau data show that children are widely distributed from very poor to very wealthy families, and that this distribution is strongly related to type of family and the racial/ethnic background of the child.

In financial aid need analysis, the family is viewed as the first source of funds to pay the direct and indirect costs of college attendance. Family resources include income and assets, and are assessed at standard rates as now codified in the Federal Methodology. Where family resources are insufficient to pay college attendance costs, financial need has been demonstrated and financial aid packages of grants, loans and earnings from employment are prepared for each student to enable him or her to enroll and pursue studies in postsecondary education.

Under the Federal Methodology, family income and assets (excluding home equity) are assessed to determine the expected family contribution. The major portion of this expectation comes from parental income. Using the New York State Higher Education Services Corporation's *ABLE-2* software for 1995-96, we have calculated the expected parental contributions from earned income. The assumed case is a dependent student, family of four, one in college, and no contribution from assets. The results are shown in the chart on this page.

Expected Parental Contribution from Earned Income
by Adjusted Gross Income under Federal Methodology
1995-96



Up to about $23,000 of family income, the Federal Methodology expects nothing from parental income. All resources are devoted to maintaining the family at a minimum living standard.

Then, at higher levels of parental income, the expectation rises. At $50,000 of parental income, the parents are expected to provide $4698 toward the college attendance costs of their child. At $75,000 the expectation rises to $11,946, and by $100,000 of parental income the Federal Methodology expects parents to provide $19,061 from income.

The expected parental contribution gets is true meaning when compared to college attendance costs. For example a student from a family of $40,000 per year AGI would be expected to provide $2753 toward meeting college attendance costs of the student. If this is less than the college budget, then financial need is demonstrated.

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College Attendance Costs

To attend college, students face direct and indirect costs of college enrollment. The direct costs are those that result only from being enrolled in college. They include tuition, fees, books and supplies. Indirect costs of college attendance are living costs while attending college and include food, housing, transportation, personal and medical care, and other costs. Through some combination of parent, student, and financial aid, each student must come up with the money to pay these bills.

For our analysis here, The College Board's report on its survey of 1995-96 college attendance costs will be used, specifically national *averages*. The reported means are for undergraduates attending full-time for nine months at institutions of different levels and control, and for students living on-campus or commuting to campus.

National Average College Attendance Costs
1995-96

	Public Colleges		Private Colleges	
	Resident	Commuter	Resident	Commuter
Four-Year Colleges	$9,285	$7,449	$19,762	$16,910
Tuition and fees	2,860	2,860	12,432	12,432
Books and supplies	591	591	601	601
Food and housing*	3,963	1,721	5,198	1,845
Transportation	565	929	521	863
Other costs	1,306	1,348	1,010	1,169
Two-Year Colleges	-	$5,752	$12,710	$10,835
Tuition and fees	1,387	1,387	6,350	6,350
Books and supplies	577	577	567	567
Food and housing*	-	1,752	4,243	1,796
Transportation	-	894	578	902
Other costs	-	1,142	972	1,220

* Housing not included for commuters.
- Insufficient data.

These data provide the third of the three sets of data needed to assess college affordability for American children. We know how children are distributed across levels of family income, we know how to convert family income into the expected parental contribution from need analysis, and we know what college attendance costs are for the 1995-96 academic year. These data are now assembled to tell the story of college affordability for American children from different family income backgrounds.

Financial Need

Financial need is the difference between college attendance costs and family resources available to pay those costs. The basic formula is:

College attendance costs
- Expected family contribution
= Financial need

In this formula, families with incomes sufficient to produce an expected parental contribution from income equal to or greater than college attendance costs are not financially needy. But as the earlier data on the distribution of children by family income shows, some are very needy, others have some need, and a few are not financially needy at all.

Beginning at the bottom, children from families with incomes below about $23,000 per year have an expected parental contribution from income (as determined by the Federal Methodology) of zero. That is, regardless of where such children would choose to attend college, the student and financial aid programs would be required to finance the entire college budget for the students.

In 1995 there were about 21.4 million children living in families with incomes below about $23,000 per year. This was 31 percent of all children living in families with at least one parent. By racial/ethnic group:

- 6.0 million children were black, and 56 percent of all black children lived in families with incomes below about $23,000 per year.
- 5.0 million children were Hispanic, and 52 percent of all Hispanic children lived in families with incomes below about $23,000 per year.
- 9.1 million children were Anglo, and 20 percent of all Anglos children lived in families with incomes below about $23,000 per year.
- 1.2 million children were of other race, mainly Asian, and 36 percent of all children of other race lived in families with incomes below about $23,000.

By family type:

- 8.8 million children lived in married couple families with incomes below $23,000, or 18 percent of all children living in this family type.
- 1.3 million children lived in male only households with incomes below $23,000, or 48 percent of children living in this family type.
- 11.3 million children lived in female only households with incomes below $23,000, or 71 percent of all children living in this family type.

Between $23,000 and about $53,000 of family income, families with children have sufficient resources to contribute at least something toward the college attendance costs of their children. However, not until $53,000 of family income does the expected parental contribution from income as determined by the Federal Methodology reach the least costly college,

$5752 at a public 2-year college. All children in these families would require something beyond the parental contribution to complete the financing of their higher educations to complete the financing of the least costly year of college--a public 2 year college and commuting from home.

In 1995 there were about 25.6 million children living in families with incomes between $23,000 and $53,000 per year. This was 37 percent of all children living in families with at least one parent. By racial/ethnic group:

- 3.1 million of these children were black, and 29 percent of all black children lived in families with incomes of between about $23,000 and $53,000 per year.
- 3.3 million of these children were Hispanic, and 34 percent of all Hispanic children lived in families in this income range.
- 18.0 million of these children were non-Hispanic whites, and about 40 percent of all Anglos children lived in families with incomes in this range.
- 1.2 million of these children were of other race--mainly Asian--and 36 percent of all children of other race lived in families within this income range.

By family type, in this income range:

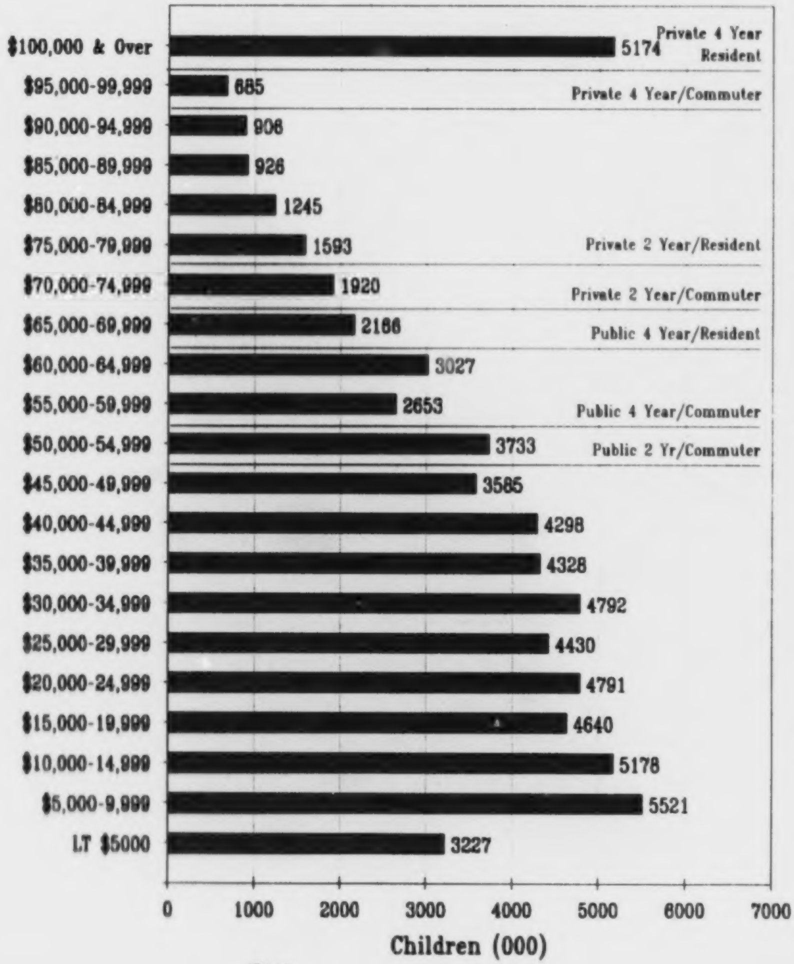
- 20.7 million children lived in married couple families, and 41 percent of all children living in married couple families lived in families with incomes of between $23,000 and $53,000.
- 1.0 million children lived with their fathers only, and 38 percent of all children living in male only households were in this family income range.
- 3.9 million children lived with their mother only, and 25 percent of all children in female only households were in this family income range.

Above about $53,000 of family income, nearly all children live in families that have enough income to send a child to a public 2 year college, if the student lives at home, without financial aid. This amounts to about 21.8 million children, or about 31 percent of all children.

But all other national average college budgets are greater, and thus the proportion of the population of children living in families that could afford these higher college budgets shrinks--sharply--at higher college attendance costs. To attend a public 4 year college as a commuter where national average college attendance costs are $7449 this year, families would have to have an income of about $59,000. To attend a public 4 year college and live on campus without financial aid would require a minimum family income of $65,000. At the highest national average college budget--$19,762 for a campus resident enrolled at a private 4 year college, the family income would have to be about $102,000.

Moreover, because children are distributed very differently across levels of family income by family type and racial/ethnic backgrounds, sharply

College Affordability for Children by Family Income Levels
1994



differing proportions of children in these different circumstances can afford to attend college. For example, while 43 percent of all children living in married couple families have family incomes of more than $53,000 per year, only 12 percent of children living only with their father only and just 5 percent of children living with their mothers only live in families with such income levels. Again, while 41 percent of all Anglo children live in families with incomes of $53,000 or more, only 28 percent of other race children, 15 percent of black children and 13 percent of Hispanic children live in such families.

Conclusions

This analysis set out to examine the relationship between children, family income and college affordability. The major findings of this analysis include the following:

- Children are widely distributed across family income levels, from what must be truly desperate poverty to extravagant affluence.
- This distribution is correlated with family type. Children living in married couple families on the whole live at far higher family income levels than do children in single parent families, and among these, children living with their mothers liver poorer than those living with their fathers.
- Anglo children (non-Hispanic whites) live at far higher family income levels than do minority children, with black children living at the lowest family income levels and having the highest poverty rates.

Unless these disparities are corrected by the time of high school graduation (and they will not be), the incomes of families leave their children on highly unequal footing when it comes to paying college attendance costs. Of course differences in high school graduation rates for children from different levels of family income will leave many out of consideration for postsecondary education at all.

This analysis uses federal data (Census Bureau) and the federal government's assessment of families' abilities to pay for college from own resources (Federal Methodology). By these federal measures, only about three children in ten American families have sufficient family income to pay for college without financial aid.

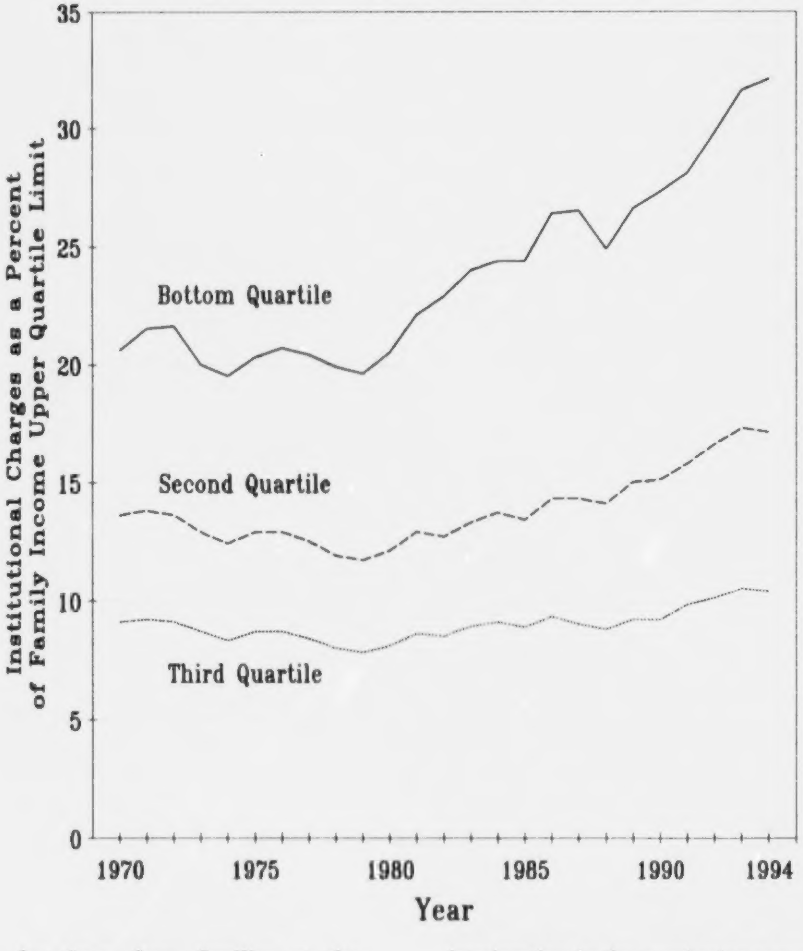
Ultimately, policy must focus on the financial needs of children and families to be able to afford college attendance. The problem is not exclusively federal because most of resources to address the problem are at the state level.

College Affordability for Children
from Different Family Types and Racial/Ethnic Backgrounds
1995-96

Control	Public			Private			
Level	2 Year	4 Year	4 Year	2 Year	2 Year	4 Year	4-Year
Residence	Commuter	Commuter	Resident	Commuter	Resident	Commuter	Resident
National Average College Attendance Costs	$5752	$7449	$9285	$10,835	$12,710	$16,910	$19,762
Equivalent Family Income	$53,000	$59,000	$65,000	$71,000	$78,000	$92,000	$102,000
Children in Families with Incomes Above this Level:							
All children	30%	26%	21%	18%	14%	9%	7%
Married couple families	43%	36%	28%	23%	18%	12%	10%
Father only	12%	9%	7%	5%	4%	2%	2%
Mother only	5%	3%	2%	2%	1%	1%	1%
Black	15%	12%	9%	6%	5%	3%	2%
Hispanic	13%	10%	8%	6%	4%	3%	2%
Anglo	41%	34%	27%	23%	18%	12%	10%
Other race	28%	24%	20%	16%	13%	9%	7%

Public and Private Institutional Charges at Different Levels of Family Income 1970 to 1994

Public University Institutional Charges as a Proportion of Family Income by Quartiles 1970 to 1994



Since 1979--the end of the era when public policy was seriously committed to equalizing higher educational opportunity--institutional charges in both public and private higher education have escalated at an annual rate averaging the Consumer Price Index plus 4 to 5 percent per year.

During this same period, inflation adjusted family incomes have remained roughly flat. But this overall stability masks a substantial redistribution in family incomes. Since the early 1970s the most affluent families have grown significantly richer and the poorest families have grown significantly poorer.

In combination--escalating institutional charges combined with family income redistribution--have produced significantly different college affordability problems for students from different family income backgrounds. In the absence of financial aid, college attendance costs are notably less of a barrier to higher educational opportunity for students from high income families and more of a barrier to students from low income families.

For example, in public universities between 1979 and 1994, institutional charges as a percent of family income:

- Increased by 2.5 percentage points for those from family incomes at the income boundary between the third and top quartiles of family income, which was $67,881 in 1994.
- Increased by 5.4 percentage points for those from family incomes at the median, which was $41,393 in 1994.
- Increased by 12.5 percentage points for those from families at the income boundary between the bottom and second quartiles of family income, which was $22,033 in 1994.

Actually this cost shift was greater and more devastating than that found in this more limited analysis, due the deterioration in the purchasing power of the federal Pell Grant, substitution of loans for grants, and increased costs of educational loans to borrowers during this period. However, this analysis will focus on the more limited but highly informative comparison of institutional charges to family income at different levels over the last twenty-five years.

We are grateful to subscriber Lisa Stevens of the Office of Corporate and Public Affairs of the Oregon State System of Higher Education for suggesting this comparison as a follow-up to our first examination of similar data in the April 1995 issue of OPPORTUNITY.

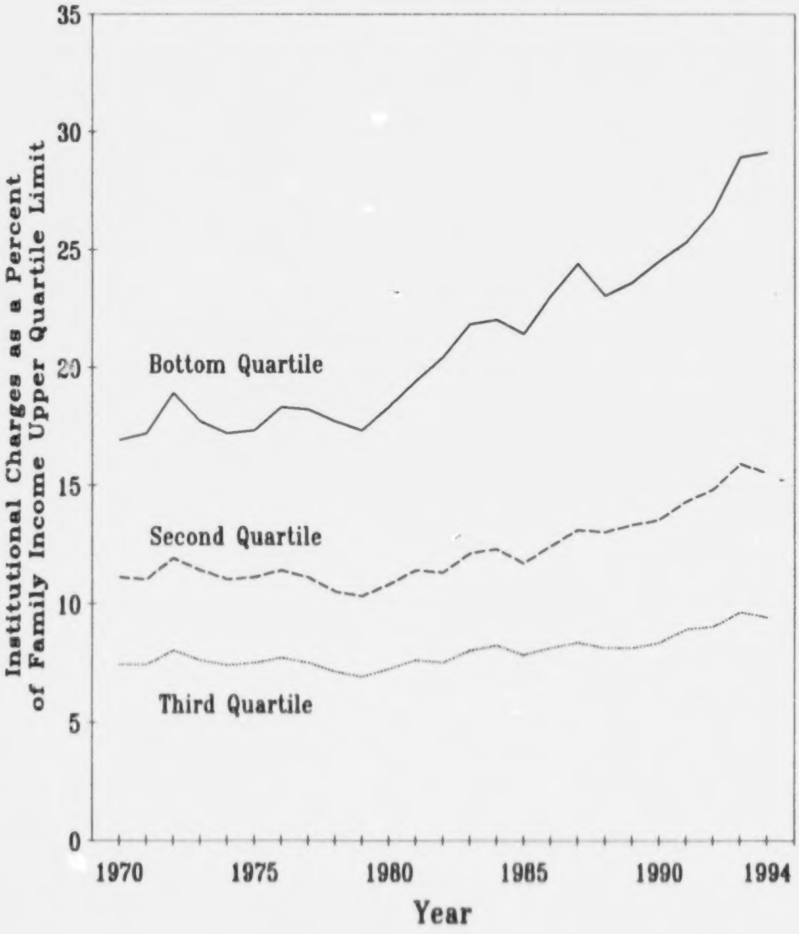
The Data

There are two sets of time-series data used in this analysis.

Institutional charges: The first set of data are institutional charges. They include tuition, fees, room and board. These data are enrollment-weighted national averages by institutional type and control. Data used here were collected by the National Center for Education Statistics in annual surveys of institutional characteristics and enrollments. The specific data used here were published by NCES in:

Snyder, T. D., and Hoffman, C. M. (October 1995). *Digest of Education Statistics 1995.* NCES 95-029. Washington, D.C.: U.S. Department of Education, National Center for Education Statistics. See Table 306.

Public 4-Year College Institutional Charges as a Proportion of Family Income by Quartiles 1970 to 1994



Institutional charges do not include all of the college attendance costs faced by students. Among those not included here, but included in college budgets used in packaging financial aid, are books and supplies, transportation, and personal and medical care while enrolled in college.

Using The College Board survey data from institutions on the more complete measures of direct and indirect costs of college attendance used in financial aid, institutional charges represent about 73 percent of attendance costs at a public 4 year university or college, and about 89 percent at an average cost private 4 year institution.

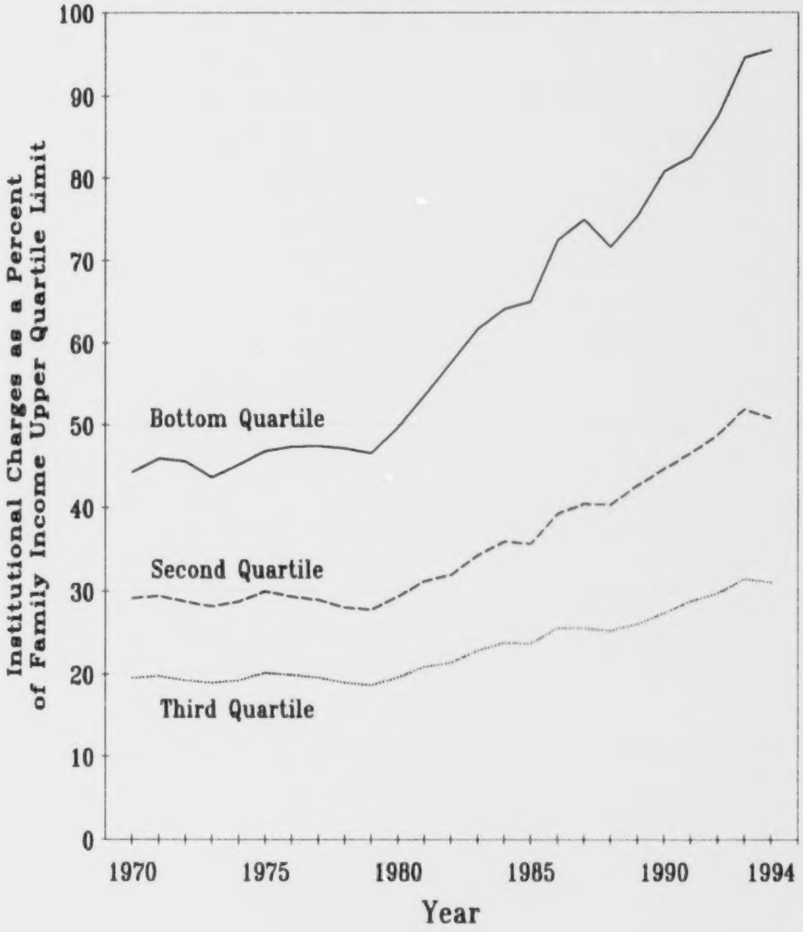
These budgets, in turn, do not include other attendance costs recognized by economists, including opportunity costs (e.g. foregone income), financing costs (loan fees and interest), and investment risk considerations. This analysis, however, is limited to use of the institutional charges data collected and reported by NCES.

For 1994-95, the institutional charges were:

Public	
University	$7082
4 year college	$6411
2 year college	$4149
Private	
University	$21,010
4 year college	$15,410
2 year college	$11,059

Between 1979-80 and 1994-95, institutional charges have increased much faster than inflation, more so in private than in public institutions, and more so in 4 year institutions than in 2 year institutions. The increases in

Private University Institutional Charges as a Proportion of Family Income by Quartiles 1970 to 1994



institutional charges, beyond inflation, between 1979-80 and 1994-95 were:

Public	
University	+39.8%
4 year college	+42.9%
2 year college	+11.6%
Private	
University	+74.7%
4 year college	+60.6%
2 year college	+44.4%

Family Income: These data are available in many forms. In this analysis we use family income quartile range boundaries for unmarried 18 to 24 year old high school graduates. The raw data used for these calculated values has been collected and published by the Census Bureau from the Current Population Survey. The most recent published report in this series is:

Bruno, R. R., and Adams, A. *School Enrollment-Social and Economic Characteristics of Students: October 1993.* U.S. Bureau of the Census, Current Population Reports, P20-479, U.S. Government Printing Office, Washington, DC, 1994. See Table 15.

We have added unpublished data for 1994 supplied by the Census Bureau for this analysis.

OPPORTUNITY has calculated the family income quartile ranges for unmarried 18 to 24 year old high school graduates--those ready to go on to college--for each year between 1970 and 1994 from this Census publication source. For 1994 these quartile ranges are:

Q1:	$0 to 22,033
Q2:	$22,033 to $41,393
Q3:	$41,393 to $67,881
Q4:	$67,881 and over

Note that these are not constant dollar intervals over the 25 years between 1970 and 1994. They reflect quartiles of the incomes of families of dependent high school graduates. Since the early 1970s, family income has undergone substantial redistribution, with higher income families notably richer, and lower income families notably poorer in recent years compared to earlier years in this time frame. For example, between 1979 and 1994, the constant dollar upper income limits of the first three quartiles changed as follows:

Q1	-14.9%
Q2	-4.7%
Q3	+4.9%

This redistribution contributes substantially to the growing disparity in college affordability across family income levels.

Public Universities

The chart on page 9 shows the ratios of institutional charges to the upper limit quartile definitions between 1970 and 1994. Two distinct periods are evident in this (and subsequent) chart. First, between 1970 and 1979, the institutional charge/family income ratios declined slightly. Then, this pattern reversed. Beginning in 1980, the shift in state resources from higher education to corrections and Medicaid began. Public institutions began to increase tuition and fee charges to students to offset the loss of state tax monies. The costs of public higher education began their shift, from taxpayers to students--a trend that continues today.

The increases in institution charges to students in public universities has varied across income levels. By quartile of family income, the increases were as follows:

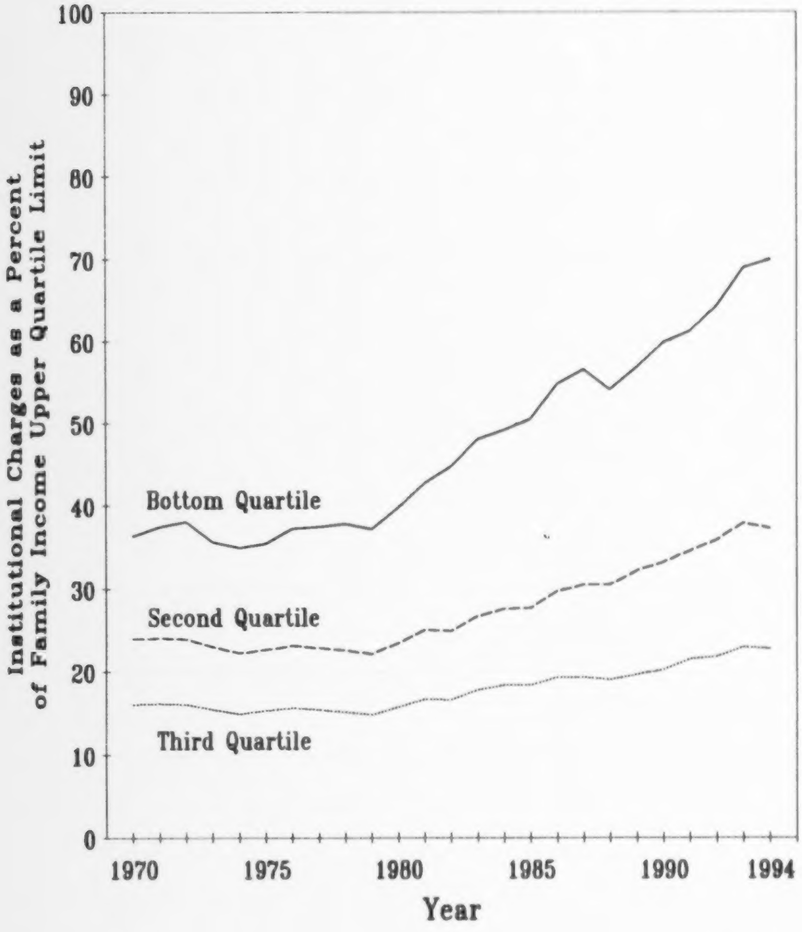
Q1: +12.5%
Q2: +5.4%
Q3: +2.6%

Thus, while institutional charges took the largest portion of incomes of lowest income students in 1979, this disparity was greatly increased over the next 15 years as those from lowest incomes saw the largest increase, and students from the most affluent families saw the smallest increase.

A similar pattern is shown in the chart on page 10 for public 4 year colleges. Between 1979 and 1994, institutional charges as a proportion of family incomes at the quartile boundaries were:

Q1: +11.8%
Q2: +5.2%
Q3: +2.5%

Private 4-Year College Institutional Charges as a Proportion of Family Income by Quartiles 1970 to 1994



Private Universities and Colleges

The patterns for private higher education institutions are somewhat similar to those for publics, but more pronounced. For example, in private universities, between 1979 and 1994, institutional charges as a proportion of family incomes at the quartile boundaries were:

Q1: +48.9%
Q2: +23.1%
Q3: +12.4%

In private 4 year colleges, the increases were:

Q1: +32.8%
Q2: +15.1%
Q3: +7.9%

Because withdrawal of state funds was not a factor in these extraordinary private university and college cost increases, some revenue maximization strategy was apparently at play. Since private institutions reallocate such a large portion of their operating revenues to student financial aid, some portion can be attributed to institutional efforts to extend private opportunities to students who might not otherwise be able to enroll.

Across both public and private institutions, the common patterns are:

- Between 1970 and 1979, relative stability in institutional charges compared to family incomes.
- Between 1979 and 1994, large and rapid growth in institutional charges compared to the prior period.
- The increases since 1979 have been by far the largest for those from the lowest levels of family income, and least for those from the highest levels of family income.

The more . . . *. . . the better*

Family Income by Educational Attainment of Householder 1956 to 1994

Perhaps no where in the data we review and report on educational attainment are the changes in private welfare more dramatically illustrated than in these data on family income by educational attainment of the family head.

Since 1973, the incomes and living standards supported by those income are being ruthlessly redistributed according to educational attainment. Very simply stated, the more education the family head has, the higher is the family income. Moreover, since 1973 families headed by persons with a high school education or less have been in economic free-fall.

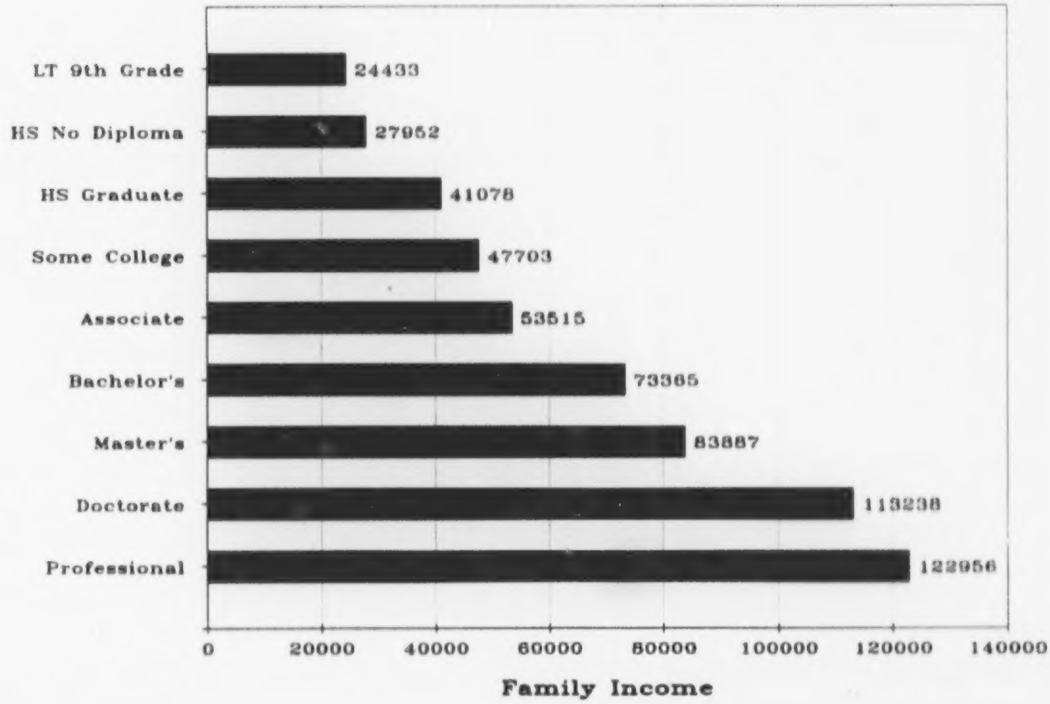
In this brief report, we update several previous analyses published in OPPORTUNITY of family income by the educational attainment of the householder (the person in whose name the family's housing unit is registered). This update merely documents the extension of trends in family income that began in the early 1970s. While median family income has remained virtually unchanged since 1973, family incomes have been redistributed across families according to the educational attainment of the breadwinner(s) in the family. Only those families headed by persons with a bachelor's degree or more are keeping up or moving ahead of inflation. At all lesser levels of educational attainment, family incomes are not keeping up with inflation.

The Data

The family income data used in this analysis are collected by the Census Bureau in the Current Population Survey. After collection, these data are published in Current Population Reports in the P60 series on consumer income. The most recent publication containing these data is:

U.S. Bureau of the Census, Current Population Reports, Series P60-188,

Average Family Income
by Educational Attainment of Householder
1994



Income, Poverty, and Valuation of Noncash Benefits: 1993, U.S. Government Printing Office, Washington, DC, 1995.

The data for 1994 that are the basis for this update have not yet been published. But were recently obtained by contacting the Census Bureau directly.

Data definitions: From 1956 through 1990, educational attainment data was collected on the basis of years of school completed. Thus, a person having completed four years of college was assumed to have completed a bachelor's degree.

Reported data on lengthening time to degree caused a rethinking of this definition at the Census Bureau. Beginning with the 1991 CPS, educational attainment was measured in terms of highest degree completed. The disjuncture in the time-series of these data is not fatal to our examination of these data for the years between 1956 and 1994, but the reader should be aware of this change.

In recent years the Census Bureau has published both mean and median family income by educational attainment of the head of the family. The original time-series begins with median, and thus the two charts that illustrate trends and changes over time use median family income by educational attainment of the head. Only the first chart uses averages.

All family income data used here are limited to families where the head of the family is 25 years or older.

Householder refers to the person in whose name the housing unit is held. If the housing unit is held in the name of both parents, information on the educational attainment of either could be reported.

Income by Education in 1994

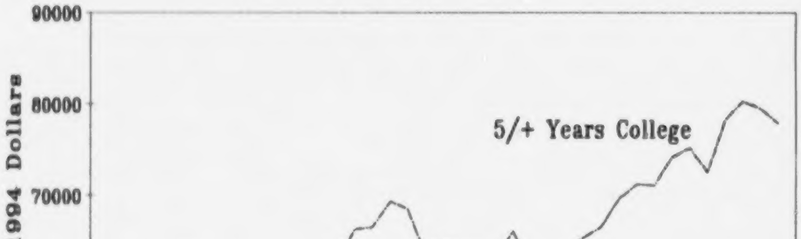
The chart on the previous page shows average family incomes by the educational attainment of the head of the family.

- For families headed by high school dropouts, average family income was $27,952.
- For families headed by persons with high school diplomas, the average family income in 1994 was $41,078.
- For families headed by persons with a bachelor's degree, average family income was $73,365.

This pattern holds across all levels of educational attainment: average family incomes increase, sharply, with increasing levels of educational attainment.

These differences can be further illustrated by extending differences in family incomes out over a 40 year working lifetime. For example, the family headed by a high school graduate will earn, on average, about $525,000 more than will the family headed by a high school dropout over 40 years. The family headed by a person with an associate's degree will earn, on average, about $500,000 more than will the family headed by the high school graduate. Then, in turn, the family headed by a person

Median Family Income
by Educational Attainment of Householder
1956 to 1994



with a bachelor's degree will earn, on average, about $800,000 more than will the family headed by the person with an associate's degree.

Trends

As shown in the chart on the previous page, two distinct eras are evident. In the first era, between 1956 and 1973, real family incomes (in constant dollars of purchasing power) increased for all families. In the second era, between 1973 and 1994, the median incomes of some types of families increased while others decreased.

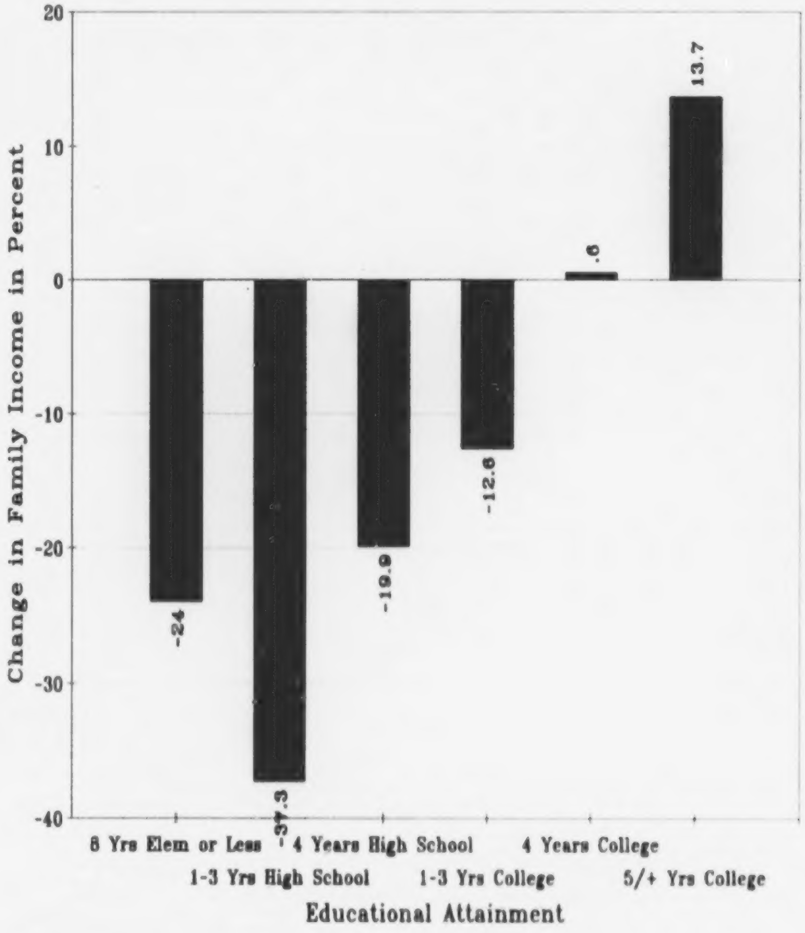
For all families, the growth in median family income during the first era, and its stagnation during the second era, is shown in the following data on constant dollar median family incomes:

1956	$26,060
1961	$28,436
1965	$32,378
1970	$38,826
1973 (peak)	$41,766
1975	$39,276
1980	$38,915
1985	$39,491
1990	$41,103
1994	$40,159

The real news during the second era is that some median family incomes went down and others went up. For example, median family income for high school dropouts increased from $26,300 in 1956, to a peak of $35,900 in 1969 and again in 1973. But by 1994 median family incomes for this group had dropped to $22,500--the lowest they have been at any time since before 1956.

Similarly, real median family income for families headed by high school graduates increased from $29,700 in 1956 to a peak of $44,019 in 1973, and have since dropped back to $35,300 by 1994--the lowest they have been since the mid-1960s.

Change in Median Family Income
by Educational Attainment of Householder
Between 1973 and 1994



On the other hand, median family income for families headed by persons with a bachelor's degree have performed comparatively well. These real incomes increased from $41,300 in 1956 to a peak of $61,600 in 1973, and by 1994 stood at $61,900.

The family group that has performed best is the one where heads have five or more years of college. In 1972 their real incomes peaked at $69,300. By 1994 their real median incomes stood at $77,900, just below the peak of $80,300 reached in 1992.

Change: 1973 to 1994

The changes described above can be illustrated simply and more clearly in the chart on this page. Here, the change in the real (constant dollar) median incomes of families by the educational attainment of the head of the family is shown between 1973--when median income for all families peak--and 1994, the most recent year.

By any measure, the differences are stunning. Real family incomes for families headed by high school dropouts have declined by 37.3 percent between 1973 and 1994. These incomes were low before, but are much lower now. Real median family incomes for families headed by high school graduates are down by 19.9 percent during this same period. Not until we get to families headed by persons with 4 years of college do we find median incomes about where they were in 1973. And only among families headed by persons with five or more years of college have median family incomes improved significantly from where they were in 1973.

Discretionary Family Income

Another useful perspective on these changes in median family income by educational attainment of the family head is to calculate and compare the proportion of family income that is available for discretionary spending. Such spending is that beyond the bare minimums required for survival.

Discretionary spending is one important measure of quality of life. In this economy of abundance, those with more discretionary income have more choices about how to live their lives than do those with less discretionary income. These lifestyle choices include both number and quality: about what to eat, how much and where to eat it: where to live, how big our abode and how to furnish living quarters; where to vacation and for how long; whether to have elective surgery; how often we buy a new car and how luxurious that car will be; and so on.

Here we define discretionary spending as that portion of median family income beyond the federal poverty level for a family of four. We have calculated this proportion of median family income by educational attainment of the family head for various years between 1970 and 1993. The results are shown in the table.

Discretionary Income as a Proportion of Family Income by Educational Attainment of Head of Household

	1970	1975	1980	1985	1990	1993
1-3 Years HS	57%	52%	48%	43%	40%	34%
HS Graduate	63%	63%	61%	60%	60%	56%
1-3 Years College	68%	67%	66%	66%	68%	65%
4 Years College	73%	74%	73%	75%	76%	76%
5/+ Years College	77%	77%	76%	78%	79%	81%

As one would expect, lower income families devote a larger share of their income to meeting basic survival needs, and have less available for discretionary spending. Thus, families headed by persons with less education and lower incomes have fewer quality of life choices to make in their lives.

More important here are the changing circumstances of families. When real income declines, discretionary income declines faster because basic survival costs are fixed. Quality of life choices erode faster than income, and life becomes increasingly desperate and hopeless. Those families headed by persons with bachelor's degrees or more are escaping this path, and their quality of life is improving. This lesson is starkly clear in these data and brutal in its significance for those who choose to ignore it.

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Number 47 **Iowa City, Iowa** **May 1996**

Slipping . . . *. . . away*

College Affordability Concerns of College Freshmen Greatest in 30 Years

The 1995 class of American college freshmen has expressed greater concern about college affordability than has any previous class of freshmen in the last 30 years.

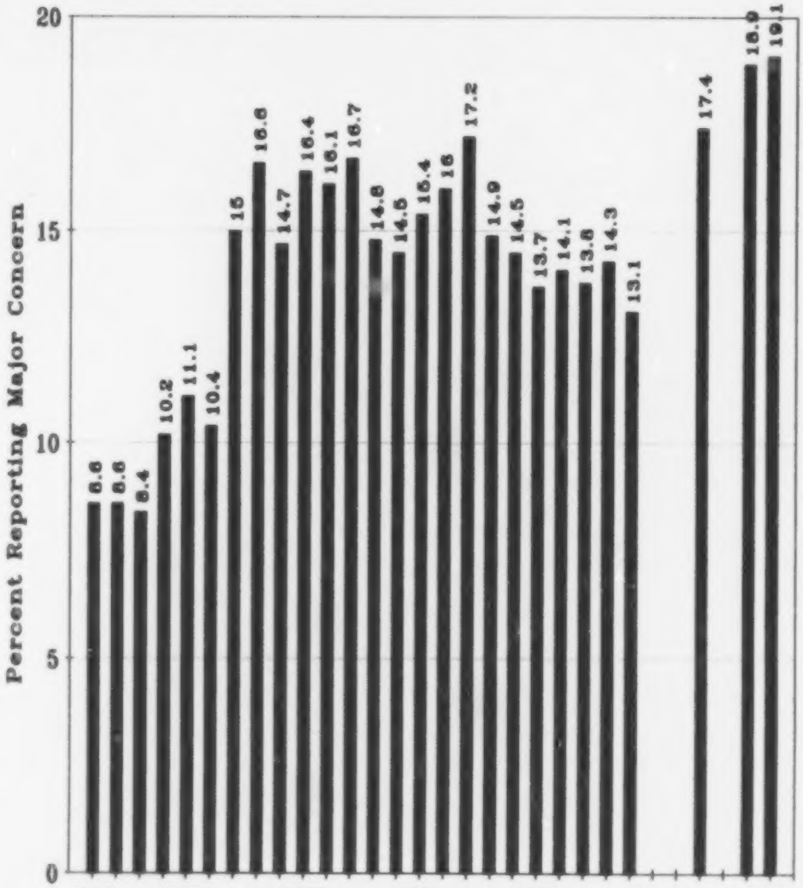
Concerns about college affordability are closely related to both student and institutional characteristics:

- *Freshmen from lowest income family backgrounds are most concerned, while freshmen from highest income family backgrounds are least concerned.*
- *Women express greater concern about college affordability than do men.*
- *Freshmen in universities--public or private--express least concern about college affordability, while freshmen in black colleges--public or private--express greatest concern.*

To a very large extent, the crisis in college affordability shown here in college freshman data is a creation of public policy. Since 1979 both the federal government and 49 of the 50 state governments have been aggressively shifting the costs of higher education from taxpayers to students.

- *The federal government has done this by shifting federal student aid from grants to loans, and by shifting loan program costs from the federal budget to student borrowers.*
- *The states have diverted state tax revenues previously committed to public higher education into corrections and Medicaid, requiring institutions to raise tuition charges to offset the loss of state tax support.*

Major Concern About Financing Higher Education Among College Freshmen 1966 to 1995



During this same period median family incomes have stagnated or declined. Thus, in real terms, college has grown far more costly to all but the most

BEST COPY AVAILABLE

affluent families since 1979.

In this analysis, we update and extend our previous analysis of affordability concerns of college freshmen reported in the April 1994 issue of **OPPORTUNITY**. Compared to the earlier analysis, the picture described here is largely one of a continued gradual deterioration in college affordability since 1979, with a sharp acceleration in the deterioration since the late 1980s.

The affordability picture continues to deteriorate both because of public policy neglect, and because real family incomes are declining in the United States. In addition, there are the growing importance of postsecondary education to a productive and well-paid workforce, the arrival of the post World War II baby boom echo, and the changing demographic composition of the population to be served by postsecondary education that add urgency to this already complex and deteriorating condition.

The cumulative effects of these conflicting, unresolved and neglected challenges promise growing inequality of educational opportunity, increasing inequality of private welfare, social instability, community disengagement, and intergenerational consequences we are only just beginning to appreciate.

The Data

Nearly all of the data examined in this analysis are collected in the annual survey of college freshmen through the Cooperative Institutional Research Program (CIRP) established in 1966 at the American Council on Education. In 1973 the CIRP was transferred to the Graduate School of Education at the University of California, Los Angeles. The freshman survey is now administered by the Higher Education Research Institute at UCLA under the continuing sponsorship of the American Council on Education.

Reports from the freshman survey are published annually by UCLA. The most recent, for 1995, is:

Sax, L.J., Astin, A.W., Korn, W.S., and Mahoney, K.M. (December 1995). *The American Freshman: National Norms for Fall 1995.* Los Angeles: Higher Education Research Institute, UCLA.

Copies of this report may be purchased from UCLA for $26.79 by calling (310) 825-1925, or faxing at (310) 206-2228.

In addition to the published data, Bill Korn of UCLA has provided **OPPORTUNITY** with special tabulations used to examine issues of college affordability in more detail than is possible with the published data alone.

The data collected in the Freshman Survey are limited to first-time, full-time American college freshmen. These students are typically, although not exclusively, recent high school graduates. These data do not describe older, often part-time college students. The special value of these data lie in their unique and powerful descriptive value of the first-time, full-time classes of freshmen entering higher education institutions over the last 30 years.

Concerns about Financing

The 1995 Freshman Survey reported that 19.1 percent of college freshmen reported that they had a major concern about their ability to finance their higher educations. This was the highest proportion reporting major concern in the 30 year history of the Survey. It continues the sharp upward trend begun after 1989 when 13.1 percent of freshmen reported a major level of concern.

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Mission Statement

This research letter is founded on two fundamental beliefs. First, sound public social policy requires accurate, current, independent, and focused information on the human condition. Second, education is essential to the development of human potential and resources for both private and public benefit. Therefore, the purpose of this research letter is to inform those who formulate, fund, and administer public policy and programs about the condition of and influences that affect postsecondary education opportunity for all Americans.

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The specific question from which these data were gathered is phrased:

Do you have any concern about your ability to finance your college education? (Mark one)
None (I am confident that I will have sufficient funds)
Some (but I will probably have enough funds)
Major (not sure I will have enough funds to complete college)

The pattern of responses to this question over the last 30 years is shown in the chart on page 1 of this issue.

- Between the mid-1960s and 1973 (when the Basic Educational Opportunity Grant Program was created), the proportion of freshmen citing major concern nearly doubled, from about 8.5 to 16.6 percent. Because institutional charges were relatively low and family incomes were growing in real terms, this growth reflects the success of public policy efforts to bring new, low income populations into higher education.
- From 1973 through 1989, the proportion of freshmen citing a major concern about college affordability declined. Particularly after 1982, this appears to be the result of the declining proportion of low income students enrolled in college or shifting enrollments to less costly institutions.
- Since 1989 the concern question has been asked only in the 1992, 1994 and 1995 Freshman Surveys. Here the proportion of freshmen citing major concerns has jumped sharply, to record high levels in each year. The reasons why will be explored shortly.

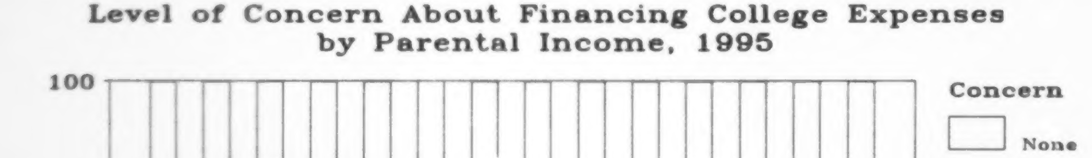
Clearly, concerns about continued college affordability are spreading, especially since the late 1980s.

Concern by Parental Income

The credibility of the freshmen concerns is affirmed by examining the relationship between concern and parental income, as shown in the chart below.

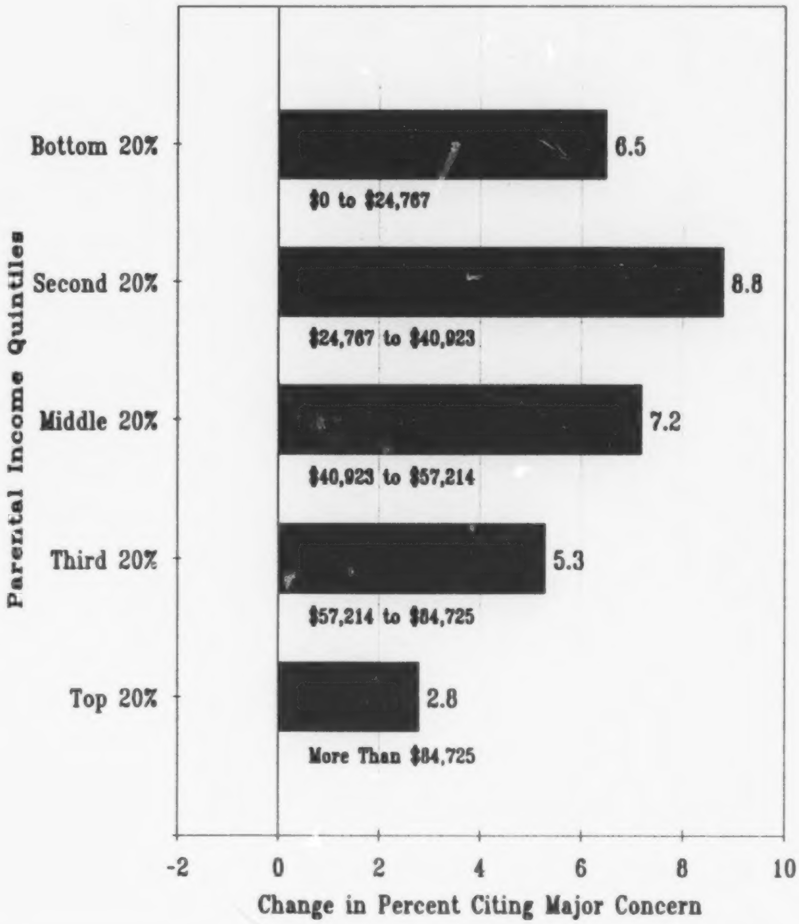
While 19.1 percent of *all* freshmen expressed major concern about their ability to finance their higher educations, the proportions ranged from 40.3 percent of those from families with incomes below $6000 per year, to 2.3 percent of those from families with incomes of $200,000 or more. The relationship was nearly linear between the extremes.

While 52.3 percent of *all* freshmen expressed some concern with their ability to finance their higher educations, among those from families



Level of Concern About Financing College Expenses by Parental Income, 1995

Change in Concern About College Affordability by Quintiles of Parental Income 1989 to 1995



with incomes below $6000 per year the proportion was 43.3 percent. The proportion citing some concern increased with family incomes to a peak of 59.2 percent for freshmen from families with incomes between $50,000 and $60,000 per year, then dropped off to 18.5 percent for those from families with incomes above $200,000 per year.

Among the 1995 class, 19.2 percent of all freshmen reported that they had no concern about their ability to finance their higher educations. Up to family incomes of about $25,000, about 14 to 16 percent of the freshmen reported no concerns. Above this family income level, the proportion indicating no concern rose steadily to 79.2 percent for those from families with incomes of more than $200,000.

Change in Concern: 1989 to 1995

Across all income levels, the proportion of college freshmen citing a major concern about college affordability increased by 6.0 percent between 1989 and 1995. However, as is always the case, the increase varied by level of parental income.

In the chart on this page we show the change between 1989 and 1995 in proportion of freshmen in each quintile of parental income that report major concern about their ability to finance their higher educations. For example, the bottom quintile of parental income spans $0 to $24,767. That is to say, exactly 20 percent of all first-time, full-time college freshmen in the fall of 1995 reported parental incomes in this range. We use quintiles to control for the effects of inflation and income redistribution during this time interval.

In 1989 26.8 percent of the freshmen in the bottom quintile of parental income reported a major concern about college affordability. In the 1995 freshman class this proportion had increased to 33.3 percent, or by 6.5 percent as shown in the chart.

The increase in major concerns about college affordability was greatest--at 8.8 percent--in the second quintile of parental income, between $24,767 and $40,923. The increase in major concern was least--up 2.8 percent--in the highest quintile of parental income, more than $84,725.

Concern by Institutional Type

Concerns about college affordability vary by institutional type and control. Among the 1995 classes, the proportion of freshmen citing major concerns about college affordability ranged from 17.1 percent in public universities, to 28.0 percent in private black colleges.

More generally freshmen enrolled in black colleges--both public and private--reported the highest levels of concern, while freshmen enrolled in universities--both public and private--reported the lowest levels of concern about financing their higher educations.

For comparison, the chart on this page also shows the proportion of freshmen in 1989 that cited major concern about their abilities to finance their higher educations. Remember that overall the proportion of freshmen citing major concern increased by 6.0 percent between 1989 and 1995.

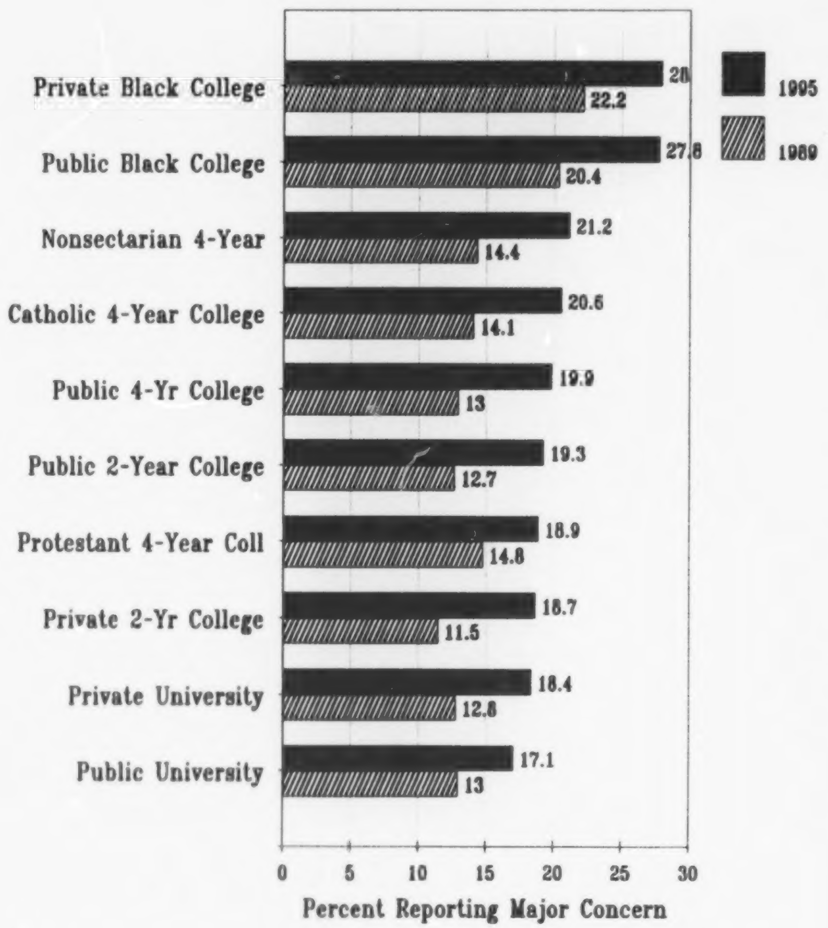
In general, the 1989 pattern is similar to the 1995 pattern. The growth in concern between 1989 and 1995 was somewhat greater in public black colleges (+7.4%), private 2-year colleges (+7.2%), public 4-year colleges (+6.9%) and nonsectarian 4-year colleges (+6.8%). The growth in major concern was least in public universities (+4.1%) and protestant 4-year colleges (+4.1%).

We get some useful understanding of why freshmen in different types of colleges and universities express varying levels of concern about college affordability by looking at the family income backgrounds of entering freshmen classes. For example, the median family incomes of the fall 1995 freshmen classes were as follows:

Private universities	$72,664
Public universities	$58,810
Nonsectarian 4-year colleges	$56,518
Catholic 4-year colleges	$55,076
Protestant 4-year colleges	$52,248
Public 4-year colleges	$48,168
Private 2-year colleges	$45,789
Private black colleges	$40,097
Public 2-year colleges	$37,871
Public black colleges	$28,605

Not coincidentally, median family incomes are highest in universities--both public and private--where concerns about college affordability are lowest. Similarly, concerns about affordability are highest in black colleges--both public and private--where median family incomes are lowest. The broader pattern of concern shown in the chart on page 3 is reflected in these data as well.

Major Concern About Financing College
by Type and Control of Institution
1989 and 1995



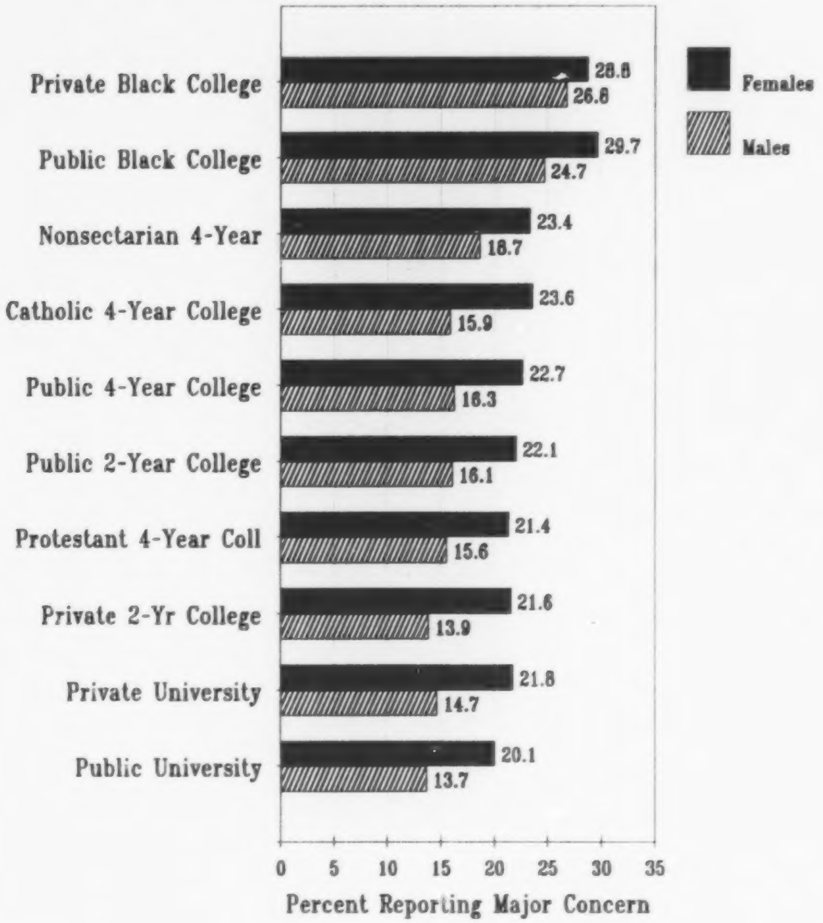
Concern by Gender

In the 1995 freshman class, 15.7 percent of all men cited a major concern about college affordability compared to 22.0 percent of all women.

This pattern holds up across all types and controls of colleges and universities. Women freshmen consistently express greater concern than men about their abilities to finance their higher educations. This difference between women and men is greatest in catholic 4-year and private 2-year colleges (7.7%), private universities (7.1%) and public universities and 4-year colleges (6.4%), and least in private black colleges (2.0%).

Until recently, freshmen women were only slightly more concerned about college affordability than were freshmen men. Between 1975 and 1985, the proportion of women citing a major concern about affordability averaged about 3.5 percent greater than the proportion of men. This

Major Concern About Financing College
by Gender and Type and Control of Institution
1995



increased to 4.3 percent in 1989, 5.9 percent in 1992, 7.2 percent in 1994 and 6.3 percent by 1995.

This gender difference in college affordability anxiety may be attributable to more than one income influence. In the 1995 class of college freshmen, median parental income for males was $51,640 compared to $46,430 for females. Apparently the higher college enrollment rate among young women has drawn more women from lower income family backgrounds.

Women college freshmen report greater use of the student financial aid system than do men. The greatest differences are in part-time work on-campus, Pell Grants, other college grants, College Work-Study, Stafford Loans, and other savings. The only areas where male freshmen report greater resource use than women are in other government aid (ROTC, BIA, GI, etc.), vocational rehabilitation funds, and full-time job while in college.

However, income *prospects*--following graduation--may also influence women's concerns about college affordability. Not only do women earn less than men following college, but the addition of educational loan repayment obligations for financially needy students who borrow to help finance their higher educations further erodes the private rate of return on a higher education investment.

The starting salary survey data published by the National Association of Colleges and Employers in July of 1995 raises a warning flag to women. Starting salary offers to male bachelor degree recipients averaged $31,987, compared to $28,077 for females--a 14 percent advantage to the men.

Most of this difference is attributable to differences in fields of study: men dominate in high paying engineering, computer science and science job offers, while women dominate in lower paying job offers in education and communications. (In engineering, women actually received higher starting salary offers than did men.)

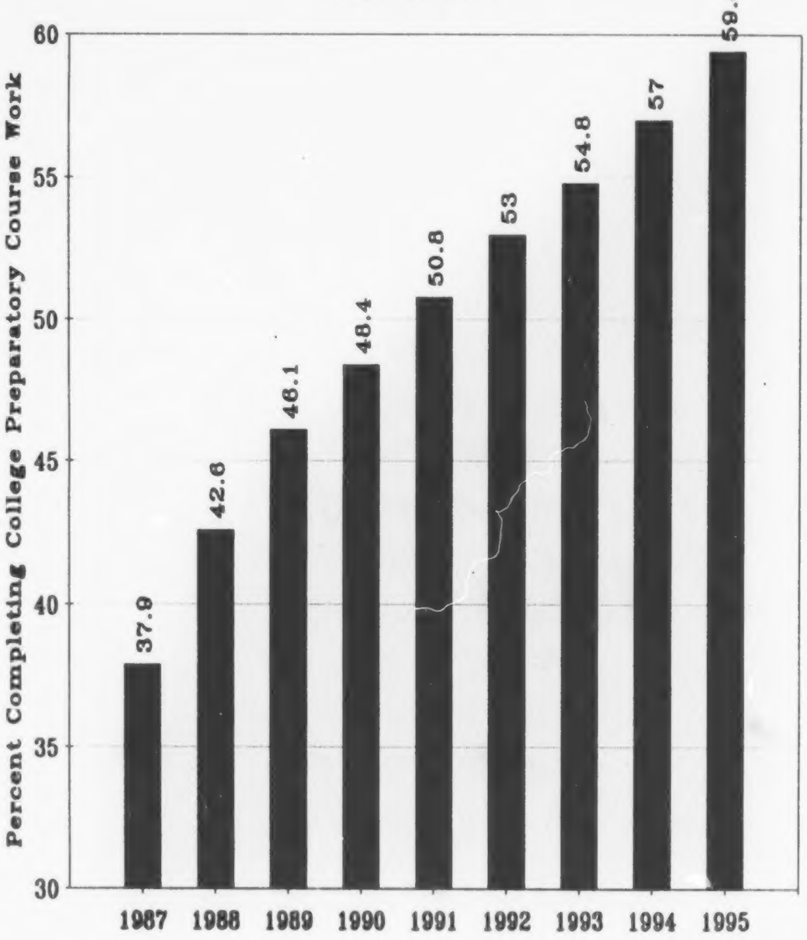
Finally, we must restate a few of the most obvious findings from this brief analysis. First, anxiety over college affordability is here, it is real, and it is not going away. For quite clear and convincing reasons, it is getting worse. College costs have been increasing at rates exceeding inflation while real family incomes have been stable or declining since 1979. Moreover, federal funding for student aid is caught up in budget deficit reduction efforts, adding uncertainty.

Second, affordability does not affect all students equally. It is an issue driven primarily by limited student resources and family incomes. Affordability is most worrisome to those from lowest income family backgrounds, and least worrisome to those from highest income family backgrounds. Ignoring affordability issues will not make them go away.

Have come so far . . . *. . . but so far to go*

Academic Preparation for College by Gender, Race/Ethnicity and Family Income

College Core Coursework Completion Rate
for ACT-Tested College Bound High School Seniors
1987 to 1995



In 1983 the National Commission on Excellence in Education published its report **A Nation at Risk**. *The Commission expressed its concern that society "had lost sight of the basic purposes of schooling, and of the high expectations needed to attain them."*

The Commission recommended increasing high school graduation requirements including curriculum expansion to define the "New Basics." These included at least 4 years of English, 3 years each of mathematics, social sciences and natural sciences, and one-half year of computer science. In addition, the Commission recommended that college-bound students take at least 2 years of a foreign language.

Since 1983 several studies have documented the large gains in the proportion of high school graduates that have completed this "New Basics" curriculum. **OPPORTUNITY** reported on the transcript studies from various national data files in July of 1995. These studies found that the proportion of high school graduates that had completed the New Basics had increased from 12.7 percent in 1982 to 46.8 percent by 1992.

Another organization monitoring the course taking patterns of high school students is the American College Testing Program (ACT). ACT's "core curriculum" is basically that recommended by the Commission in 1983.

In this analysis, we are interested in *who* is completing this New Basics or core curriculum in preparation for college. We are interested in the course-taking of college-bound high school seniors by gender, race/ethnicity, and especially family income.

New Basics course-selection and performance in those courses are the most important academic efforts high school students can make to prepare for college. Unless and until the individual has demonstrated commitment to college by preparing academically for the opportunity, public policy to broaden postsecondary educational opportunity in such areas as outreach, campus location and capacity, tuition, financial aid and admissions cannot overcome lack of preparation for and commitment to academic success in college on the part of the high school student.

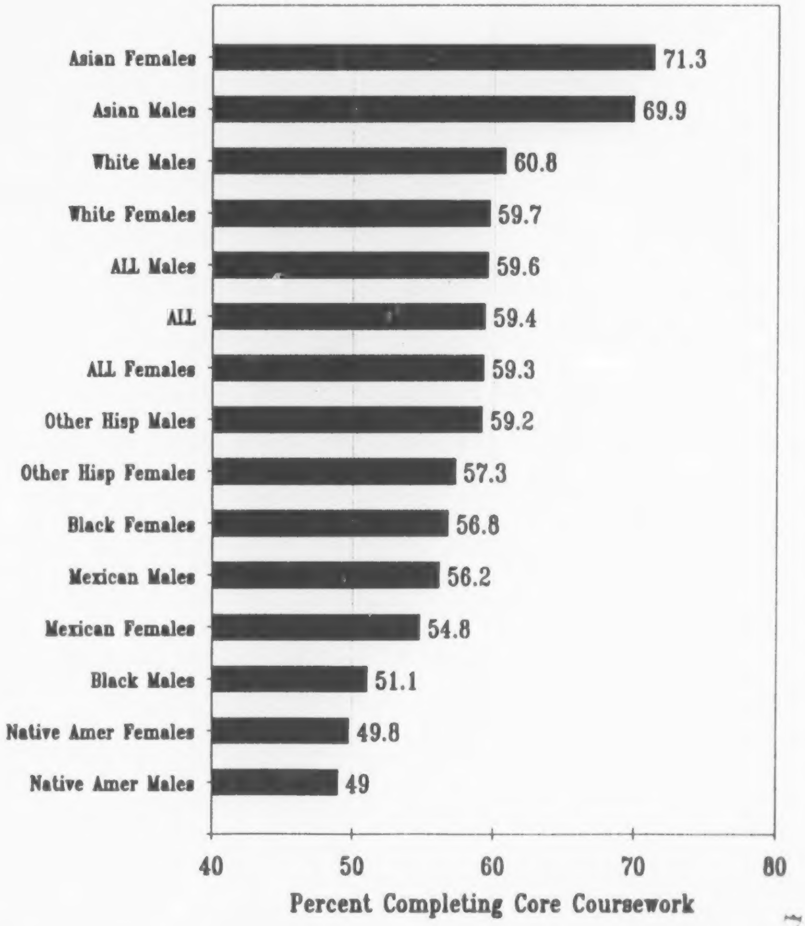
The Data

The data used in this analysis and reported here were compiled from records of the ACT Assessment. Special tabulations were prepared from the records of college-bound high school seniors who had taken the ACT Assessment and provided student profile and high school course information as a part of their registration. We are grateful to Dr. James Maxey, Assistant Vice President and Senior Research Scientist at ACT, for providing the data reported here.

Several comments on the ways we have used these data will help interpret the charts and tables. First, we are primarily interested in monitoring the course taking records of high school students. In particular, we are interested in looking for progress over time, as well as comparisons between demographic groups, in high school course-taking patterns as defined as "New Basics" by the National Commission on Excellence in Education in 1983. ACT calls this set of courses the "Core Curriculum," and because this is ACT's data we use their terminology in this report. For our purposes here, these terms are interchangeable.

We are also interested in the contribution this set of high school coursework makes to performance on the ACT Assessment. Thus we highlight differences in mean ACT composite scores between those that have completed the Core Curriculum and those who have not completed this coursework. Normally, this means high school students have not completed the recommended 3 years of math and/or 3 years of natural science.

College Core Coursework Completion Rate
by Gender and Race/Ethnicity
1995



While we provide extensive data on Core Curriculum completion and mean ACT composite scores by gender and race/ethnicity, we are mainly interested in these data by estimated parental income levels. All data are in current--not constant--dollars, and thus are not strictly comparable over time.

In 1995 there were ACT Assessment records on 945,369 college-bound high school seniors. This was 36 percent of the high school graduates, and 59 percent of the high school graduates that went on to college in 1995 immediately after high school. Note that this does not include all high school graduates or new college freshmen, and thus some sampling bias is reflected in these data if one were to try to interpret national data from this more limited data set.

Moreover, the above percentages have risen from 29 percent of all high school graduates and 52 percent of all high school graduates that went on to college in 1987 immediately after high school. This growth may contribute to an underestimate of growth in the proportion of college freshmen arriving on campus academically prepared for college coursework.

Core Coursework

In 1995 59.4 percent of all college-bound ACT-tested high school seniors had completed the core curriculum. As shown in the chart on page 7, this represents a large gain from the figure of 37.9 percent recorded in 1987.

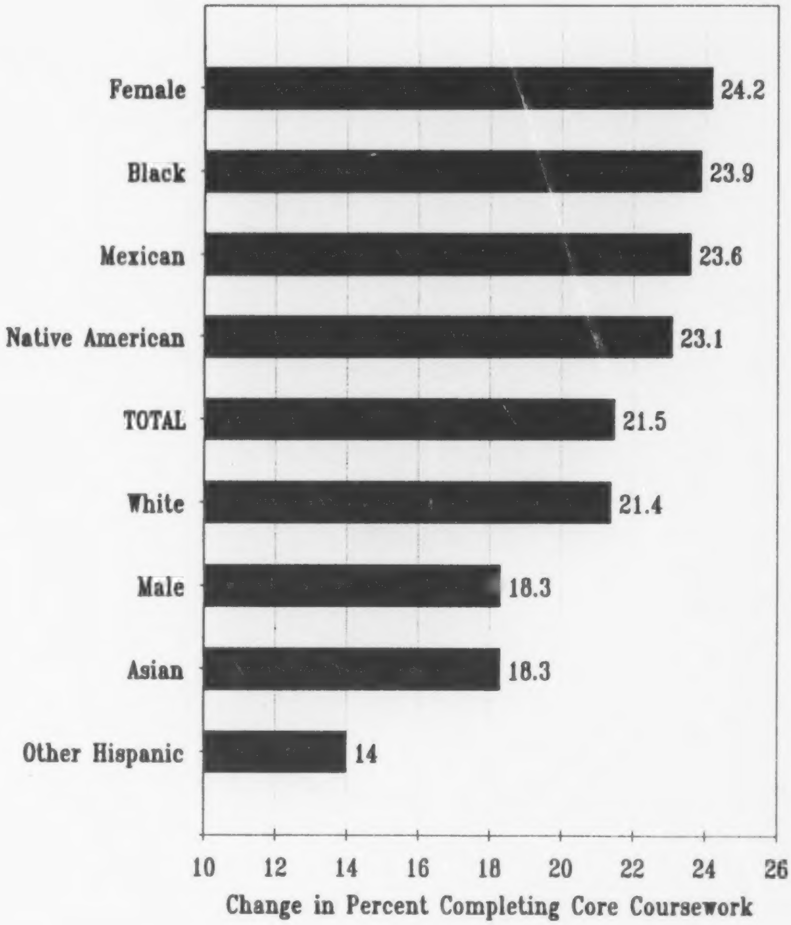
Moreover, the progress in academic preparation appears to be quite steady between 1987 and 1995, despite a growing share of all high school graduates taking the ACT Assessment in high school. The number of ACT-tested college-bound high school seniors that completed the core curriculum increased by 246,000. The number that did not complete the core decreased by 104,000.

Core by Gender

By gender, males are more likely to have completed the core curriculum than are females. In 1995 59.6 percent of the males had completed the core coursework, compared to 59.3 percent of all females. However, because many more females than males take the ACT Assessment, graduate from high school and go on to college, the *number* of females completing the core was 113,000 greater than the number of males completing the core. Clearly there are many more well prepared female high school graduates than male that are continuing their studies after high school in college.

Between 1987 and 1995, the proportion of males completing the core coursework had increased by 18.3 percent. During the same period, the proportion of ACT-tested female high school graduates completing the core had increased by 24.2 percent. While in 1987 the proportion of males exceeded the proportion of females completing the core coursework by 6.2 percent, by 1995 the gap had narrowed to 0.3 percent. At this rate, the proportion of college-bound females completing the core curriculum will surpass the proportion of males in 1996.

Change in Percent of ACT-Tested High School Seniors That Completed College Core Coursework Between 1987 and 1995



Core by Race/Ethnicity

By race/ethnicity categories, in 1995 Asians are the most likely to have completed the college core curriculum--70.7 percent--while Native Americans are the least likely--49.5 percent.

Between 1987 and 1995, blacks, Mexicans and Native Americans made the most progress in completing the core coursework, while other Hispanics (including Puerto Ricans), Asians and whites made the least progress.

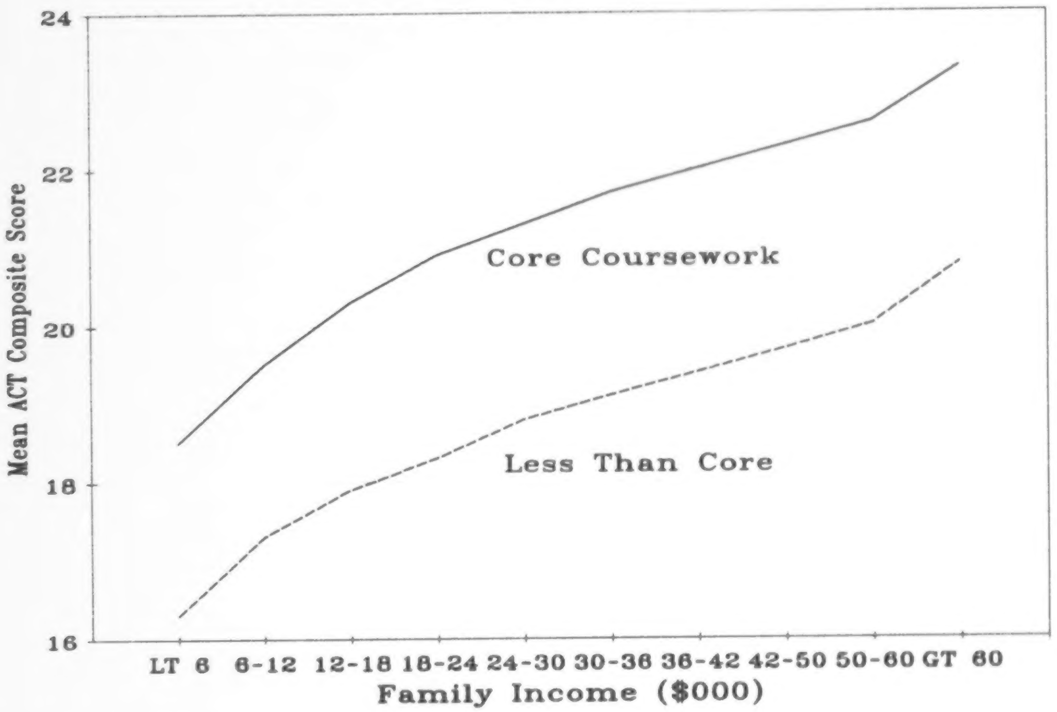
Core by Gender and Race/Ethnicity

Combining gender and race/ethnicity, Asian females were the best prepared for college (71.3 percent), while Native American males were the least likely to be academically prepared (49.0 percent) for college.

Core by Family Income

Among 1995 college-bound, ACT-tested high school seniors, core coursework completers ranged from 45.0 percent of those from estimated

Mean ACT Composite Scores by Family Income
for College Core and Non-core Completers
1995



family incomes of less than $6000 per year, to 68.2 percent for those from families with incomes of more than $60,000 per year. The relationship between these extremes was nearly linear: with each increase in parental income, there was an increase in the proportion of ACT-tested seniors who had completed the college curriculum core coursework.

Core Coursework and ACT Score

In 1995 the average ACT composite score for college-bound high school seniors who had completed the college core courses was 22.0, compared to 19.1 for those who had not completed the core courses. This difference exists for all population groups:

All	+2.9
Male	+3.1
Female	+2.6
Black	+2.1
Native American	+2.7
White	+2.8
Asian	+2.9
Mexican	+2.6
Other Hispanic	+2.7

In research at ACT on the relationship between course-taking and performance on the ACT Assessment, students were most likely to have completed the recommended 4 years of English and 3 years of social science. They were least likely to have completed the recommended 3 years of mathematics and 3 years of natural science. Significantly, in the ACT research, the relationship between the number of courses taken and performance on the corresponding subtest of the ACT Assessment was strongest in mathematics and natural science, and weakest in English and social science. Thus, most of the above difference appears to be attributable to course-taking deficiencies in mathematics and natural sciences.

At any given level of family income, the difference is somewhat smaller due to the higher proportions of core coursework completers at higher family income levels and lower proportions at low income levels.

For example, while the overall difference in mean ACT composite scores between core completers and those completing less than core work was 2.9 points, the average of the differences at each income interval was 2.5 points. Given the independence of family income, this latter difference probably more accurately measures the contribution of completion of the core coursework to the ACT composite score than does the overall group mean difference.

Summary and Conclusions

The 1983 report **A Nation at Risk** challenged Americans to regain appreciation for the basic purposes of schooling and for the high expectations needed to attain them. Specifically, the report laid out a New Basics high school curriculum consisting of 4 years of English, and 3 years each of mathematics, social sciences and natural sciences. Here we have examined ACT Assessment data to determine who is rising to this challenge and to measure progress where it has occurred.

The ACT data on the high school courses taken by college-bound high school seniors show large gains in the proportion of college-bound high school seniors that have completed the New Basics or Core Curriculum. In 1987 37.9 percent of ACT-tested seniors had completed the recommended curriculum, and by 1995 this had risen to 59.4 percent.

These gains were widespread. The gains occurred in both genders, all racial/ethnic groups, and across all levels of family income.

But this brief analysis and the data that follow describe very large and important differences between groups of college-bound high school seniors here differentiated by gender, race/ethnicity and family income in levels of preparation for college. For example:

- Females have made larger gains in preparation for college than have males since 1987, and the gap between them is now eliminated.
- Asians are far more likely to be prepared for college than are Native Americans. But this gap too appears to be narrowing.
- Students from wealthy families are far more likely than students from poor families to complete the New Basics curriculum. While our data do not permit us to measure this precisely, the gap between rich and poor appears to be widening between 1987 and 1993.

High school students cannot change their genders, race/ethnicity nor family incomes. But they can take charge of their academic careers through the courses they take and the effort they put into them. This study shows that many have and thereby improved their chances for success in college. But still nearly 2 out of 5 college-bound high school seniors will enter college not fully prepared for the challenge.

TABLE 1
ACT Composite Scores and College Preparatory Core Course Completion for All College-Bound High School Seniors
1987-1995

Estimated Family Income	1995 ACT Mean Composite Score			College Prep Core Course Completers				
	All[1]	Core	LT Core	1987	1989	1990	1993	1995
0-$5,999	17.3	18.5	16.3	27.4%	34.0%	35.7%	41.2%	45.0%
$6,000-11,999	18.4	19.5	17.3	30.3	38.3	39.9	44.9	49.8
$12,000-17,999	19.2	20.3	17.9	32.7	40.1	42.2	47.9	52.4
$18,000-23,999	19.7	20.9	18.3	35.1	42.2	44.6	50.0	54.5
$24,000-29,999	20.2	21.3	18.8	36.4	44.3	46.2	52.0	56.3
$30,000-35,999	20.6	21.7	19.1	38.2	45.8	48.0	53.8	58.0
$36,000-41,999	20.9	22.0	19.4	40.1	47.5	49.4	54.7	59.3
$42,000-49,999	21.3	22.3	19.7	42.6	50.1	52.2	57.4	61.0
$50,000-59,999	21.6	22.6	20.0	44.0	52.1	54.1	59.7	63.2
$60,000 & over	22.5	23.3	20.8	47.2	55.8	58.4	64.7	68.2
TOTAL	20.8	22.0	19.1	37.9%	46.1%	48.4%	54.8%	59.4%
Number:								
1995	945,369	529,146	360,925					
1993	875,603	453,064	374,256					
1990	817,096	370,379	394,540					
1989	855,309	380,576	445,236					
1987	777,508	283,562	464,760					

[1] Includes those for whom core course work could not be determined.

TABLE 2
ACT Composite Scores and College Preparatory Core Course Completion for Male College-Bound High School Seniors
1987-1995

Estimated Family Income	1995 ACT Mean Composite Score			College Prep Core Course Completers			
	All[1]	Core	LT Core	1987	1990	1993	1995
0-$5,999	17.4	18.8	16.3	30.5%	38.4%	41.7%	45.6%
$6,000-11,999	18.4	19.8	17.1	33.3	41.6	45.0	49.6
$12,000-17,999	19.2	20.5	17.8	35.6	44.3	48.7	51.8
$18,000-23,999	19.8	21.2	18.2	38.3	46.6	50.4	54.2
$24,000-29,999	20.4	21.6	18.7	39.6	48.4	52.9	56.1
$30,000-35,999	20.7	22.0	19.0	41.5	50.2	54.7	58.0
$36,000-41,999	21.0	22.2	19.4	43.1	51.9	55.6	59.1
$42,000-49,999	21.4	22.5	19.6	46.0	54.1	58.2	60.9
$50,000-59,999	21.7	22.8	19.9	47.8	55.9	60.4	63.1
$60,000 & over	22.6	23.5	20.7	50.0	60.1	65.3	67.9
TOTAL	21.0	22.2	19.1	41.3%	50.9%	55.9%	59.6%
Number:							
1995	416,159	231,182	156,397				
1993	393,707	205,844	162,625				
1990	373,310	175,840	169,671				
1987	356,695	140,352	199,505				

[1] Includes those for whom core coursework could not be determined.

TABLE 3
ACT Composite Scores and College Preparatory Core Course Completion for Female College-Bound High School Seniors
1987-1995

Estimated Family Income	1995 ACT Mean Composite Score			College Prep Core Course Completers			
	All[1]	Core	LT Core	1987	1990	1993	1995
0-$5,999	17.2	18.3	16.3	25.7%	34.0%	40.8%	44.7%
$6,000-11,999	18.3	19.4	17.3	28.4	38.8	44.9	49.9
$12,000-17,999	19.1	20.2	18.0	30.7	40.6	47.3	52.7
$18,000-23,999	19.6	20.7	18.4	32.5	42.9	49.6	54.7
$24,000-29,999	20.1	21.1	18.9	33.6	44.3	51.2	56.4
$30,000-35,999	20.5	21.5	19.1	35.4	46.1	53.0	58.0
$36,000-41,999	20.9	21.8	19.4	37.3	47.2	54.0	59.5
$42,000-49,999	21.2	22.1	19.8	39.4	50.4	56.6	61.1
$50,000-59,999	21.6	22.4	20.1	42.0	52.5	59.0	63.3
$60,000 & over	22.5	23.2	20.8	44.5	56.6	64.1	68.4
TOTAL	20.7	21.7	19.1	35.1%	46.4%	53.9%	59.3%
Number:							
1995	529,210	297,964	204,528				
1993	481,896	247,220	211,631				
1990	443,786	194,539	224,869				
1987	420,729	143,205	265,235				

[1] Includes those for whom core coursework could not be determined.

TABLE 4
ACT Composite Scores and College Preparatory Core Course Completion for Black College-Bound High School Seniors
1987-1995

Estimated Family Income	1995 ACT Mean Composite Score			College Prep Core Course Completers			
	All[1]	Core	LT Core	1987	1990	1993	1995
0-$5,999	15.6	16.5	15.0	25.4%	35.3%	41.1%	45.1%
$6,000-11,999	16.3	17.1	15.3	28.5	39.6	44.7	50.7
$12,000-17,999	16.6	17.4	15.7	30.2	41.4	47.7	53.0
$18,000-23,999	16.9	17.7	15.8	31.8	42.2	49.1	55.5
$24,000-29,999	17.2	18.0	16.1	32.8	44.7	50.3	55.6
$30,000-35,999	17.6	18.4	16.5	34.2	46.7	53.1	57.0
$36,000-41,999	17.8	18.7	16.6	34.9	48.2	53.2	59.9
$42,000-49,999	18.3	19.0	17.1	39.0	49.4	56.1	61.2
$50,000-59,999	18.4	19.2	17.0	38.8	51.4	57.6	62.4
$60,000 & over	19.2	20.0	17.7	43.3	52.7	60.4	64.6
TOTAL	17.1	18.0	15.9	30.9%	42.6%	48.9%	54.5%
Number:							
1995	89,155	48,097	40,099				
1993	80,401	38,893	40,620				
1990	71,197	29,814	40,127				
1987	61,772	18,789	42,109				

[1] Includes those for whom core coursework could not be determined.

TABLE 5
ACT Composite Scores and College Preparatory Core Course Completion for Native American College-Bound High School Seniors
1987-1995

Estimated Family Income	1995 ACT Mean Composite Score			College Prep Core Course Completers			
	All[1]	Core	LT Core	1987	1990	1993	1995
0-$5,999	16.3	17.8	15.7	16.8%	26.2%	31.9%	36.0%
$6,000-11,999	17.1	18.4	16.5	20.2	29.7	37.0	38.7
$12,000-17,999	17.8	19.3	16.9	36.0	35.8	43.7	42.7
$18,000-23,999	18.3	19.7	17.2	27.4	40.5	44.7	46.7
$24,000-29,999	18.7	19.8	17.7	28.7	39.5	47.1	51.6
$30,000-35,999	18.8	20.0	17.6	28.2	39.4	50.0	53.0
$36,000-41,999	19.3	20.6	17.8	32.2	41.2	49.5	54.9
$42,000-49,999	19.9	21.1	18.6	36.8	46.4	50.7	54.4
$50,000-59,999	19.9	20.8	18.9	32.4	46.5	55.5	58.3
$60,000 & over	20.6	21.6	19.2	36.7	49.5	58.0	61.3
TOTAL	18.6	20.1	17.4	26.4%	37.8%	45.7%	49.5%
Number:							
1995	11,361	5,398	5,509				
1993	10,384	4,537	5,390				
1990	9,101	3,163	5,208				
1987	7,359	1,769	4,943				

[1] Includes those for whom core coursework could not be determined.

TABLE 6
ACT Composite Scores and College Preparatory Core Course Completion for White College-Bound High School Seniors
1987-1995

Estimated Family Income	1995 ACT Mean Composite Score			College Prep Core Course Completers			
	All[1]	Core	LT Core	1987	1990	1993	1995
0-$5,999	19.2	20.8	18.0	28.8%	35.1%	40.3%	44.1%
$6,000-11,999	19.9	21.3	18.6	30.8	39.2	43.7	48.5
$12,000-17,999	20.3	21.7	18.9	33.0	41.8	47.2	51.4
$18,000-23,999	20.6	21.9	19.1	33.5	44.6	49.6	53.9
$24,000-29,999	20.9	22.0	19.4	36.7	46.0	51.6	55.8
$30,000-35,999	21.1	22.2	19.5	38.4	47.8	53.4	57.6
$36,000-41,999	21.3	22.4	19.7	40.2	49.3	54.5	58.9
$42,000-49,999	21.5	22.5	19.9	42.7	52.2	57.1	60.8
$50,000-59,999	21.8	22.8	20.2	44.9	54.1	59.5	62.9
$60,000 & over	22.6	23.4	20.9	47.2	58.3	64.6	68.1
TOTAL	21.5	22.6	19.8	38.8%	49.1%	55.5%	60.2%
Number:							
1995	650,664	388,508	257,159				
1993	625,242	342,884	275,294				
1990	605,361	290,929	301,253				
1987	610,780	234,118	369,995				

[1] Includes those for whom core course work could not be determined.

TABLE 7
ACT Composite Scores and College Preparatory Core Course Completion for Asian College-Bound High School Seniors
1987-1995

Estimated Family Income	1995 ACT Mean Composite Score			College Prep Core Course Completers			
	All[1]	Core	LT Core	1987	1990	1993	1995
0-$5,999	17.5	18.5	16.1	41.6%	54.1%	56.1%	57.6%
$6,000-11,999	18.9	19.9	17.2	46.1	59.4	62.6	63.4
$12,000-17,999	19.4	20.1	18.0	49.2	60.9	64.0	65.8
$18,000-23,999	20.3	21.2	18.4	50.8	61.9	65.3	67.2
$24,000-29,999	21.0	21.6	19.4	51.0	63.4	68.0	71.0
$30,000-35,999	21.5	22.3	19.5	55.4	62.8	68.7	71.8
$36,000-41,999	21.9	22.6	20.1	56.5	65.1	72.2	71.3
$42,000-49,999	22.3	23.0	20.7	55.7	66.7	71.1	71.0
$50,000-59,999	22.9	23.4	21.5	58.5	66.5	72.4	75.3
$60,000 & over	24.4	24.9	22.9	59.9	70.5	74.0	78.1
TOTAL	21.6	22.4	19.5	52.4%	63.6%	68.5%	70.7%
Number:							
1995	27,784	19,237	7,989				
1993	24,754	16,600	7,649				
1990	19,081	11,734	6,714				
1987	13,885	7,070	6,411				

[1] Includes those for whom core coursework could not be determined.

TABLE 8
ACT Composite Scores and College Preparatory Core Course Completion for Mexican College-Bound High School Seniors
1987-1995

Estimated Family Income	1995 ACT Mean Composite Score			College Prep Core Course Completers			
	All[1]	Core	LT Core	1987	1990	1993	1995
0-$5,999	16.4	17.6	15.4	22.8%	35.6%	38.9%	44.8%
$6,000-11,999	17.4	18.5	16.2	28.6	40.0	46.8	51.5
$12,000-17,999	17.7	18.7	16.7	31.2	42.3	48.0	52.6
$18,000-23,999	18.0	19.1	16.8	31.0	43.2	50.7	53.2
$24,000-29,999	18.6	19.6	17.4	32.6	45.4	49.2	55.6
$30,000-35,999	19.1	20.1	17.6	35.2	49.1	52.0	58.7
$36,000-41,999	19.5	20.5	18.2	38.0	47.8	52.1	57.3
$42,000-49,999	19.8	20.8	18.5	41.0	50.9	56.7	58.3
$50,000-59,999	20.5	21.3	19.1	39.8	50.6	57.1	62.2
$60,000 & over	20.9	21.8	19.3	42.3	55.2	62.4	66.1
TOTAL	18.6	19.8	17.2	31.8%	44.2%	50.0%	55.4%
Number:							
1995	24,431	13,435	10,801				
1993	27,713	13,764	13,753				
1990	22,806	9,770	12,349				
1987	17,451	5,407	11,614				

[1] Includes those for whom core coursework could not be determined.

TABLE 9
ACT Composite Scores and College Preparatory Core Course Completion for Other Hispanic College-Bound High School Seniors
1987-1995

Estimated Family Income	1995 ACT Mean Composite Score			College Prep Core Course Completers			
	All[1]	Core	LT Core	1987	1990	1993	1995
0-$5,999	16.0	17.3	15.0	28.6%	35.8%	38.9%	42.9%
$6,000-11,999	17.1	18.2	16.0	37.9	44.1	48.7	49.9
$12,000-17,999	17.7	18.7	16.5	39.9	49.3	52.6	53.6
$18,000-23,999	18.2	19.3	16.9	42.2	50.5	53.8	56.0
$24,000-29,999	18.6	19.5	17.4	45.7	51.3	58.2	57.6
$30,000-35,999	19.3	20.2	17.8	50.6	56.3	60.6	61.0
$36,000-41,999	19.5	20.4	18.0	51.1	57.6	60.1	62.0
$42,000-49,999	20.0	20.9	18.4	50.4	56.1	65.4	63.2
$50,000-59,999	20.2	20.9	18.9	56.4	60.8	66.0	66.1
$60,000 & over	21.4	22.0	19.8	56.5	64.4	70.1	71.5
TOTAL	18.7	19.9	17.2	44.0%	51.8%	57.0%	58.1%
Number:							
1995	24,054	13,585	9,812				
1993	13,894	7,693	5,799				
1990	10,669	5,250	4,886				
1987	7,566	3,149	4,003				

[1] Includes those for whom core coursework could not be determined.

The Poster

With last month's issue we mailed to subscribers a poster of average family income by educational attainment of the head of the household in 1994. The poster was a hit. Subscribers have called to place small and large orders for copies to be distributed to others. Among the targets for additional posters are high schools, state legislators and institutional members of national organizations.

We have had the poster reprinted to make it available in quantity. The prices are as follows:

Single copies:	$4.00 each
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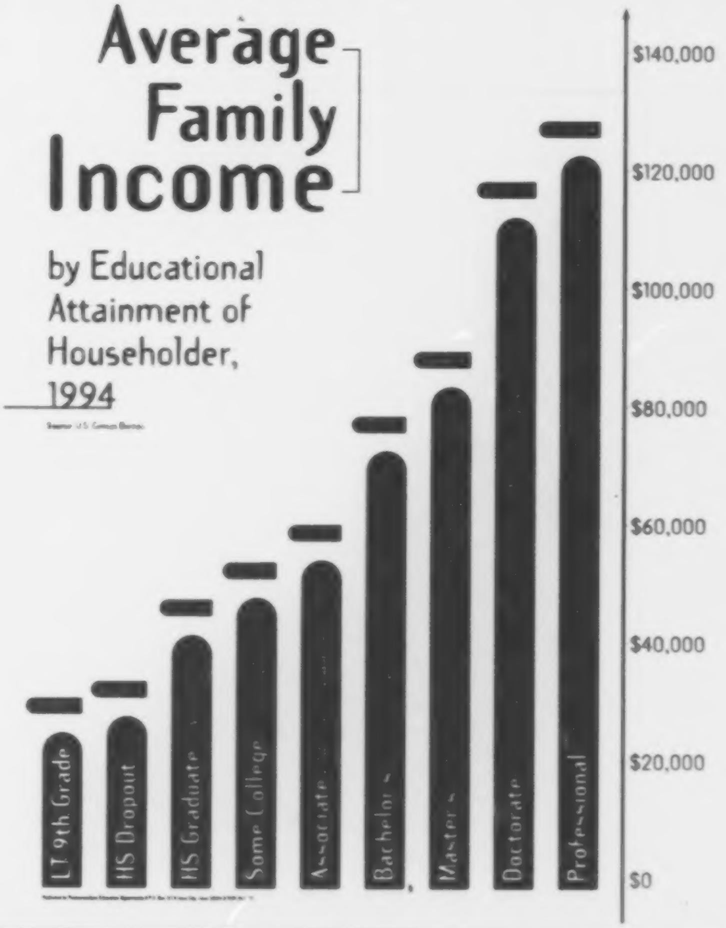

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Postsecondary Education
OPPORTUNITY

The Mortenson Research Seminar on Public Policy Analysis of Opportunity for Postsecondary Education

Number 48 **Iowa City, Iowa** **June 1996**

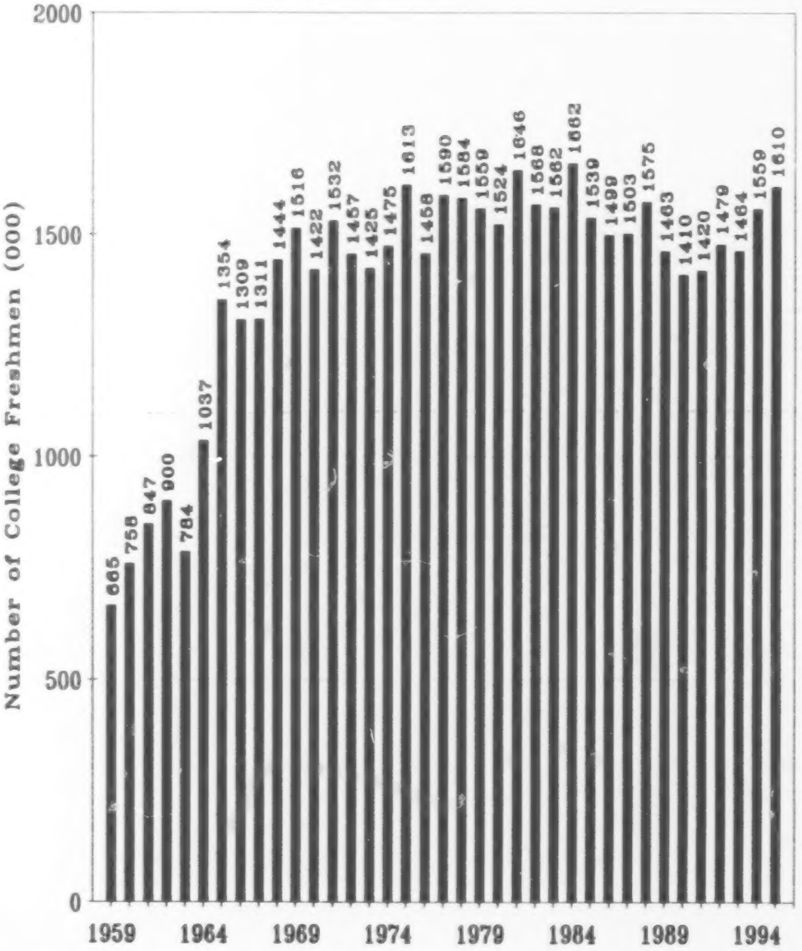
More high school graduates . . . *. . . not greater participation*

College Freshmen Numbers Up but Reasons Differ from Past Growth Sources

A fundamental change in the flow of students from high school into colleges that began about 1991 is only now becoming clear:

- *Between 1975 and 1991, while the number of high school graduates was decreasing by 29 percent, the number of college freshmen declined by only 12 percent. This was a direct result of large increases in the proportion of high school graduates continuing their educations in college immediately following high school graduation, from 51 to 62 percent.*
- *Between 1991 and 1995, the number of college freshmen has increased by 13 percent. But this time the increase is* **not** *the result of increased college continuation rates among recent high school graduates--the rates actually declined by 0.5 percent. Rather, the increase in the number of freshmen is the result of increases in the number of high school graduates by 14 percent.*
- *The college continuation rate has remained about flat for the last five years--a phenomenon unprecedented in historical data and inconsistent with changes occurring in the labor force that require ever-higher levels of education and training following high school.*

College Freshmen Who Were Recent High School Graduates
1959 to 1995



The 1995 class of high school graduates enrolled in college in the fall of 1995 at about the same rate as have the previous four classes. This flattening of the college continuation rate curve is unprecedented in the 37 year history of these data. Despite large and growing differences between the incomes of college graduates and

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high school graduates over the last five years (and longer), these earnings gains are not drawing more high school graduates into college. Apparently, other factors have curtailed the long record of growth in college continuation rates after high school that ran almost without interruption from 1973 through 1991.

There are in 1995, however, more recent high school graduates enrolled in college than at any time since 1988. This is a direct and exclusive result of an increase in the number of high school graduates, not increased college participation by those high school graduates. The echo of the post World War II baby boom began arriving at high school graduation in 1992. Thus even with a constant college continuation rate, college freshmen enrollments have managed annual increases since 1990.

In this analysis, we explore the changing pattern in college continuation rates over time, but especially since 1991. In addition to the summary data, data are presented separately by gender and race/ethnicity.

The Data

Data used in this analysis were collected in the October *Current Population Survey* (CPS), a monthly nationwide survey of about 50,000 households that is administered by the Census Bureau, and tabulated and reported by the Bureau of Labor Statistics. The October CPS includes special questions on the school enrollment and high school graduation status of youth 16 to 24 years of age.

The data reported here are for those who have graduated from high school during the previous twelve months. In terms of higher education enrollments, these are the students that generate most of first-time, full-time college freshman enrollments in American higher education.

This data series began in 1959 for summary and gender data. White and non-white racial breakdowns were added in 1960, and blacks and Hispanics added in 1976. Since 1976 we can derive Anglo (non-Hispanic whites) and other race (mainly Asian) from the published data.

Because the Bureau of Labor Statistics is always interested in employment, the published data also contain extensive data on labor force participation and employment/unemployment of students enrolled in college. These data are examined in this issue of OPPORTUNITY. Also, these reports contain useful data on high school dropouts and their experience in the labor force.

The reports on which this analysis are based were supplied by Sharon Cohany, Economist at the Bureau of Labor Statistics, at (202) 606-6378.

College Freshmen

As shown in the chart on the previous page, there were 1,610,000 freshmen enrolled in college in October of 1995 who had graduated from high school during the previous twelve months. This number is up by 51,000 over October 1994, and up by 200,000 over October 1990. While the current trend is slightly upward, the number of fall college freshmen who had graduated from high school during the previous twelve months has narrowly fluctuated between 1,410,000 (1990) and 1,662,000 (1984) since 1968. That will begin to change significantly, as we will point out shortly in this analysis.

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Mission Statement

This research letter is founded on two fundamental beliefs. First, sound public social policy requires accurate, current, independent, and focused information on the human condition. Second, education is essential to the development of human potential and resources for both private and public benefit. Therefore, the purpose of this research letter is to inform those who formulate, fund, and administer public policy and programs about the condition of and influences that affect postsecondary education opportunity for all Americans.

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*"College Enrollment and Work Activity of 1995 High School Graduates." *News*. USDL 96-152. Washington, DC: U.S. Department of Labor.

The fall 1995 freshman class was 48 percent male and 52 percent female. The number of college freshmen women has been larger than the number of males consistently since 1973 following the end of the military draft and exemption therefrom for college enrollment of males.

By race/ethnicity, the reported distribution of fall 1995 freshmen who were recent high school graduates was 81 percent white, 11 percent black, and 10 percent Hispanics (who may be of any race). If we disaggregate these data into distinct groups, the 1995 freshman class was 72 percent Anglo (non-Hispanic whites), 11 percent black, 10 percent Hispanic, and 8 percent of other race (mainly Asian).

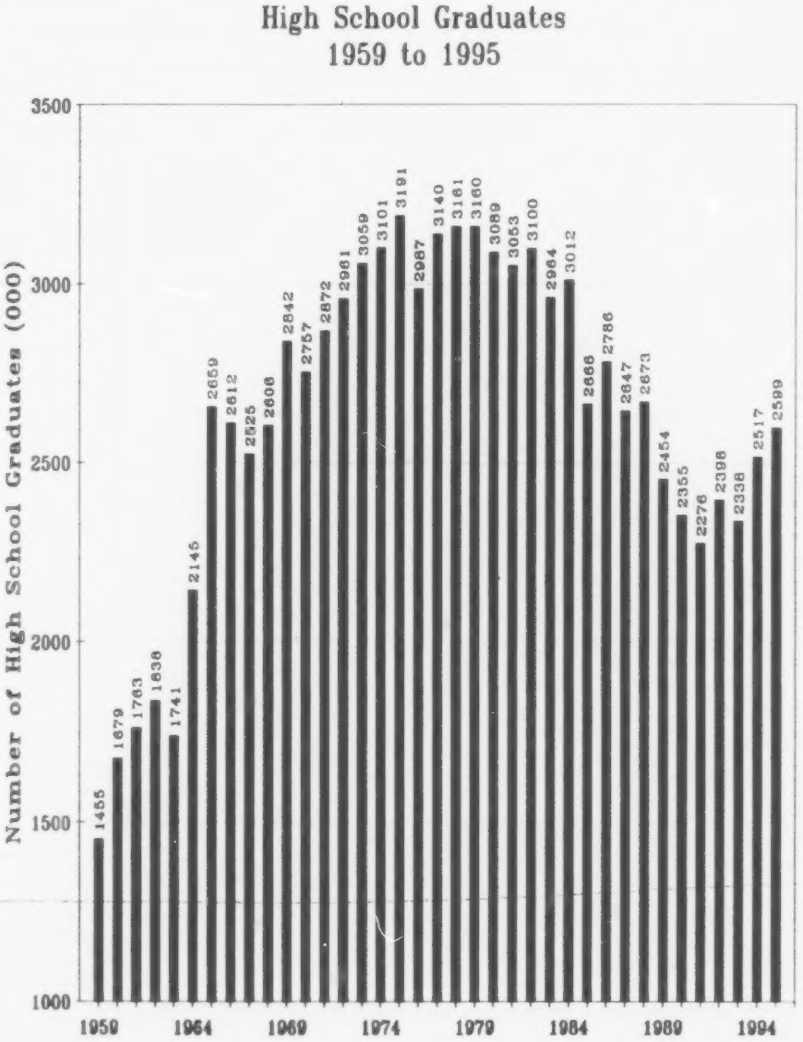
Migration and live birth changes have altered the race/ethnicity profiles of American college freshmen (and will continue to do so). The proportional distribution of college freshmen in 1980 and 1995 and the shift was:

	1980	1995	Change
Anglo	83.4%	71.6%	-11.8%
Black	9.9%	11.4%	+1.5%
Hispan	4.5%	9.6%	+5.1%
Others	2.2%	7.4%	+5.2%

Of these 1.61 million freshmen, 90 percent were enrolled full-time and 10 percent part-time. About 65 percent were enrolled in 4-year colleges, and 35 percent in 2-year colleges.

While enrolled in college, 47 percent were in the labor force. Of those 87 percent were working while 13 percent were looking for work. Labor force and employment rates were somewhat higher for females then males, and considerably higher for whites than for blacks and Hispanics.

High School Graduates



The above data on college freshmen in October of 1995 are limited to those who had graduated from high school between October 1994 and October 1995. The Current Population Survey found 2,599,000 high school graduates during this period. The following data describe this cohort.

In the educational pipeline, the 1995 high school graduates are the product of live births about 18 years earlier. In 1977 there were 3,327,000 births. Between 1977 and 1995, some children die, a few leave the country, some enter the country, and many dropout of high school before graduating. Thus, about 728,000 children born in 1977 dropout of our cohort before reaching high school graduation in 1995. (The BLS report 604,000 high school dropouts between October 1994 and October 1995.)

Of the 2.6 million 1995 high school graduates, 48 percent were males and 52 percent females. By race/ethnicity, using our distinct classifications, 69 percent were Anglo, 14 percent black, 11 percent Hispanic, and 6 percent were of other race, mainly Asians.

Like college freshmen enrollments, the race/ethnicity of high school graduates is changing. The proportional distribution of 1980 and 1995 high school graduates was:

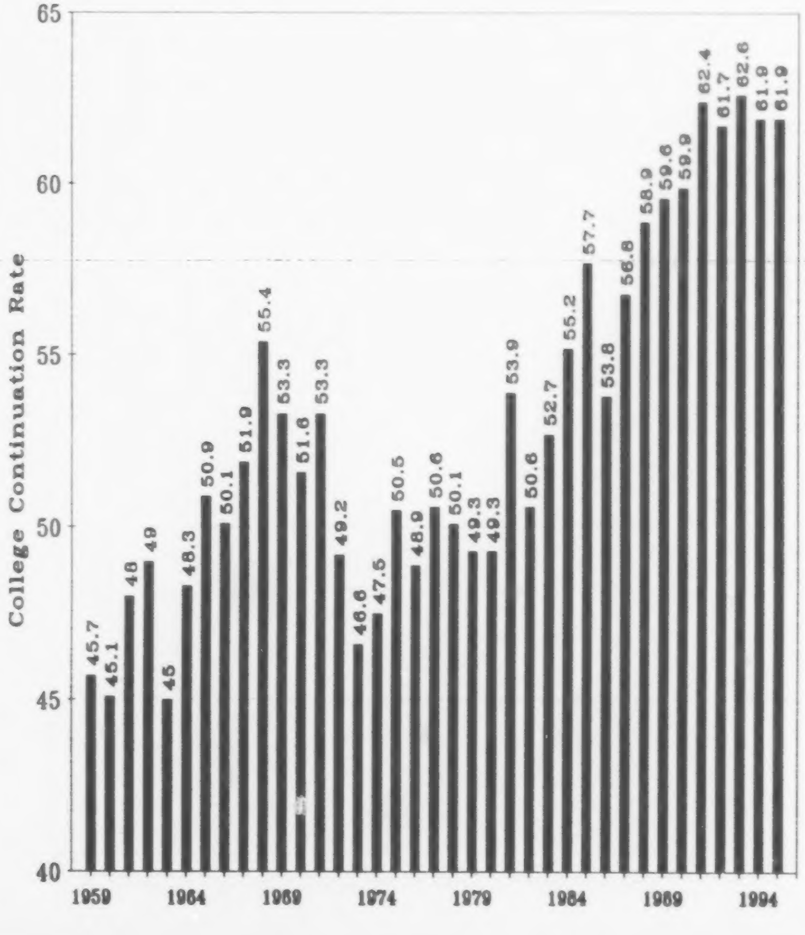
	1980	1995	Change
Anglo	82.6%	69.3%	-13.3%
Black	11.7%	13.7%	+2.0%
Hispan	4.2%	11.1%	+6.9%
Others	1.5%	6.0%	+4.5%

Clearly, Anglos have been a declining share of the population of high school graduates, and all minority group shares are increasing. This shift will both continue and occur at different rates in different states.

The National Center for Education Statistics has projected *public* high school graduates through 2006. Between 1994 and 2006 the number of public high school graduates is projected to increase by 20.6 percent. If this occurs among non-public high school graduates as well, there will be 3.1 million high school graduates by 2006, or roughly the numbers reached in the late 1970s when the post World War II baby boom reached high school graduation.

This growth will be experienced highly unevenly across the states. Between 1994 and 2006, public high school graduates are projected to increase by as much as 93 percent in Nevada. During the same time they will decrease by 13 percent in West Virginia.

College Continuation Rates
for Recent High School Graduates
1959 to 1995



College Continuation Rates

The number of college freshmen divided by the number of high school graduates is the college continuation rate. This rate is our measure of college access for recent high school graduates.

This rate is calculated for each of the 37 years in this data series. It is also calculated in later sections of this report for males, females, Anglos, blacks, Hispanics and other race cohorts. The aggregate rate is shown in the chart on this page.

In 1995 61.9 percent of those who had graduated from high school between October 1994 and October 1995 were enrolled in college. Within sampling error limits, the college continuation rate has remained flat at close to 62 percent for each of the last five years.

Between 1973 and 1991 the college continuation rate made steady and substantial progress, from about 47 percent to 62 percent of all high school graduates continuing their educations into college immediately following high school. This increase of 15 percent in the college continuation rate added about 398,000 students to the 1995 freshman class over the 1973 rate.

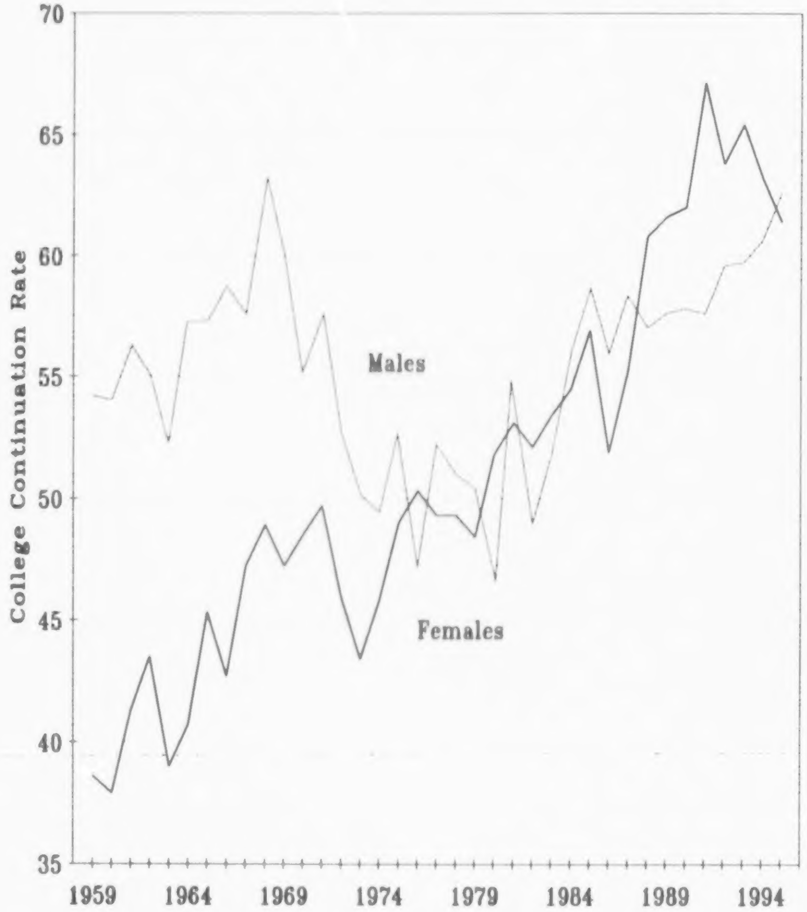
The importance of this chart, particularly the flattening of the college continuation rate between 1991 and 1995, cannot be overstated.

> *In a labor market that increasingly requires substantial amounts of postsecondary education to make workers more productive and thereby justify higher wages, the flattening of the college continuation rate indicates a failure of public policy to meet the challenge to broaden opportunity for higher education.*

Gender

The rate at which male and female high school graduates have continued their educations in college between 1959 and 1995 is shown in the chart on this page. While the rates in 1995 are nearly identical, the historical patterns are so different between the genders as to make one wonder if both live in the same time and place.

College Continuation Rates by Gender for Recent High School Graduates 1959 to 1995



Among males, the college continuation rate was about 55 percent prior to the Vietnam War, then rose to a peak of 63.2 percent in 1968--the highest rate reached in the 37 year history of this data series. Following the end of the military draft, the rate dropped to a low of 46.7 percent in 1980--the lowest rate reached in the last 37 years. Since 1980 the rate for males has resumed growth, and reached 62.6 percent in 1995, the second highest college continuation rate for males on record.

Among females a very different pattern is shown by the BLS data. For the most part the last 37 years have shown substantial growth in the college continuation rate for recent female high school graduates, from about 38 percent around 1960 to the peak of 67.1 percent in 1991.

Since 1991, however, the rate for females has declined to 61.4 percent by 1995. The decline since 1991 means that about 78,000 fewer recent female high school graduates went on to college in 1995 compared to the 1991 rate.

Race/Ethnicity

Between 1960 and 1975, the Bureau of Labor Statistics reported high school graduate and college freshmen data for whites and non-whites. Since 1976 the BLS has reported these data for whites, blacks and Hispanics. We will use these data to describe college participation rates between 1960 and 1995 for whites and blacks, and for 1976 through 1995 for Hispanics and those of other race (mainly Asians).

The college continuation rates for whites and blacks are shown in the chart on the next page. The data shown for blacks is actually for nonwhites between 1960 and 1975. Prior to the more recent Asian immigration, these data appear to effectively describe the rates for blacks. We have shown both the actual point observations for blacks, with a line plotting the moving 3-year average through these points to emphasize the trend to these data.

For whites the college continuation rate has shown substantial growth between 1974 and 1991, from 47.1 to 64.6 percent. But since 1991 it has declined, to 62.6 percent by 1995. This decline reflects a loss of about 42,000 college freshmen enrollments in 1995 compared to the 1991 rate. The decline appears to be the result of the drop-off in female rates during this period.

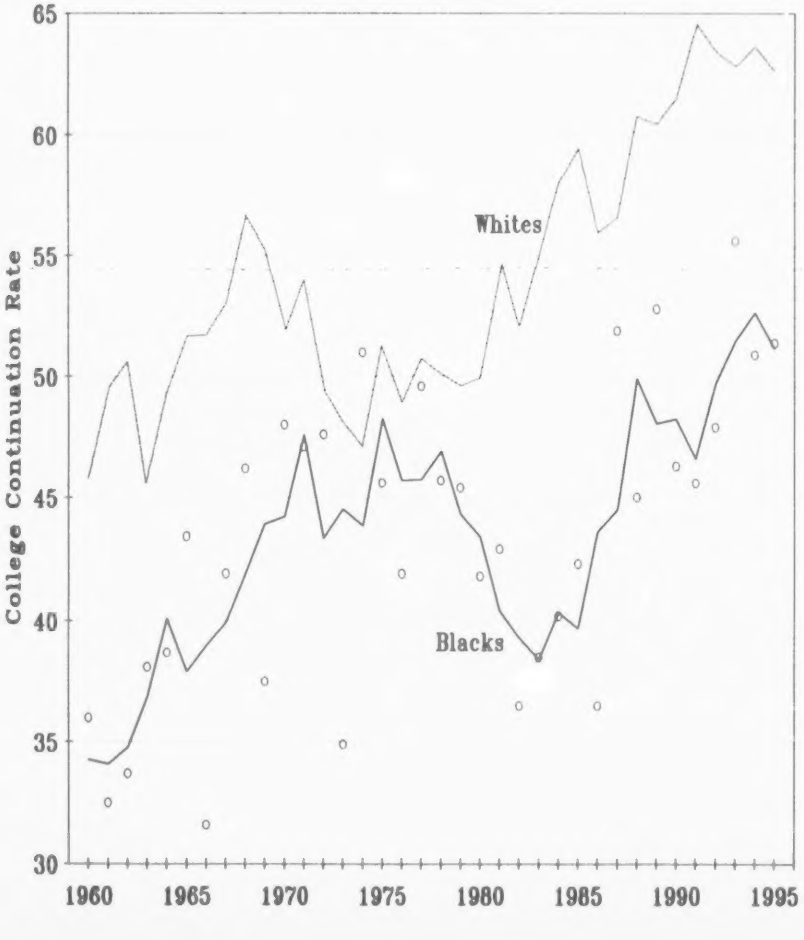
For blacks the significant but brief period of equality with whites in the

1970s in higher education access is apparent in the same chart. In the 1960s, the college continuation rate for blacks lagged the rate for whites by an average of 12.9 percent. Then, beginning in 1970 this gap began to close. For the 1970s, the gap averaged 3.0 percent. But between 1980 and 1995, the gap has reopened and averaged 13.4 percent--wider over the last 16 years than it was in the 1960s prior to the national commitment to equality.

This Hispanic college continuation rate is plotted against the white rate, although in these data Hispanics are included in the white data. To emphasize the underlying trend in the Hispanic rate we have plotted a 3-year moving average as a line as well as the calculated points. This reduces the statistical noise ever present in the small numbers sampling of the Current Population Survey.

In the 1970s the college continuation rate for Hispanic high school graduates was close to the rate for whites. In fact, in 1976, 1977 and 1980 the calculated rate for Hispanics exceeded the rate for whites.

College Continuation Rates
for White and Black Recent High School Graduates
1960 to 1995



During the early 1980s the college continuation rate for Hispanic high school graduates began to lag behind the rate for whites, and remains there in the 1990s as well. Since 1984 the Hispanic rate has lagged the white rate by an average of 10.0 percent for each of the last twelve years.

The "other race" category is calculated from published data by subtracting the data for whites and blacks from the total. This category constituted 2.3 percent of all college freshmen in 1976, but by 1995 was 7.4 percent of the total. This group includes both Asians and American Indians, and is mainly Asians.

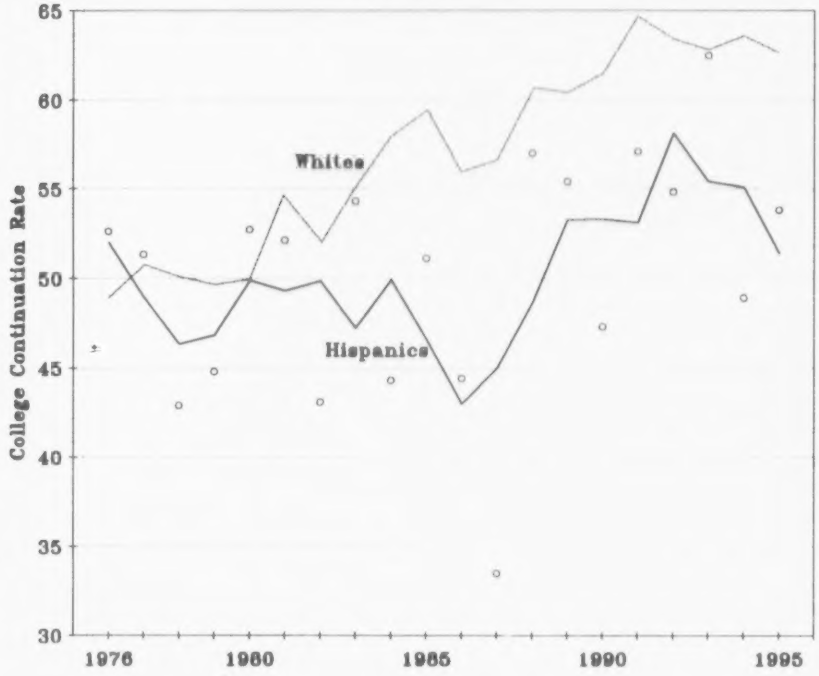
Because of the small numbers and sampling variability from one year to the next, we have plotted both the calculated rates year by year as well as the moving 3-year average for other race to highlight underlying trends in these data.

The college continuation rate for the other race category averages well above the rate for whites, usually about 10 percent above the white rate. Despite the spikiness to these data, for much of the last 19 years the college continuation rate for high school graduates of other race has been above 70 percent.

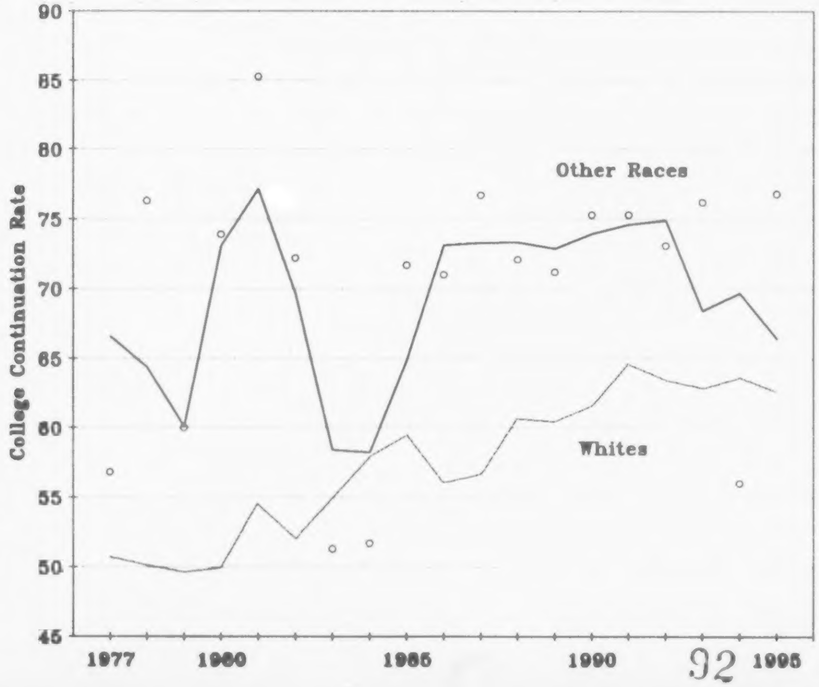
Among these major demographic groups, the aggregated college continuation rate that has been flat for the last five years obscures differences and shifts that are important:

- The college continuation rate for women is now about the same as the rate for men, but has been declining while the rate for males has been increasing.
- The college continuation rates for whites and Hispanics have been decreasing, while they have been increasing for blacks.
- Asians appear to have the highest rate of continuing their formal studies after high school.

College Continuation Rates for White and Hispanic Recent High School Graduates 1976 to 1995



College Continuation Rates for White and Other Race (Asian) Recent High School Graduates 1977 to 1995



Enrollment Status

Freshmen starting college the fall following their year of high school graduation do so primarily as full-time students. In 1995, 90 percent of the college freshmen who were recent high school graduates were enrolled on a full-time basis.

Since these data were first reported in 1959, the proportion of these freshmen who were enrolled full-time has remained consistently above 90 percent. Between 1960 and 1973, the proportion ranged between 94 and 96 percent. It dropped off after 1973, but has generally remained in the range from 90 to 92 percent since then.

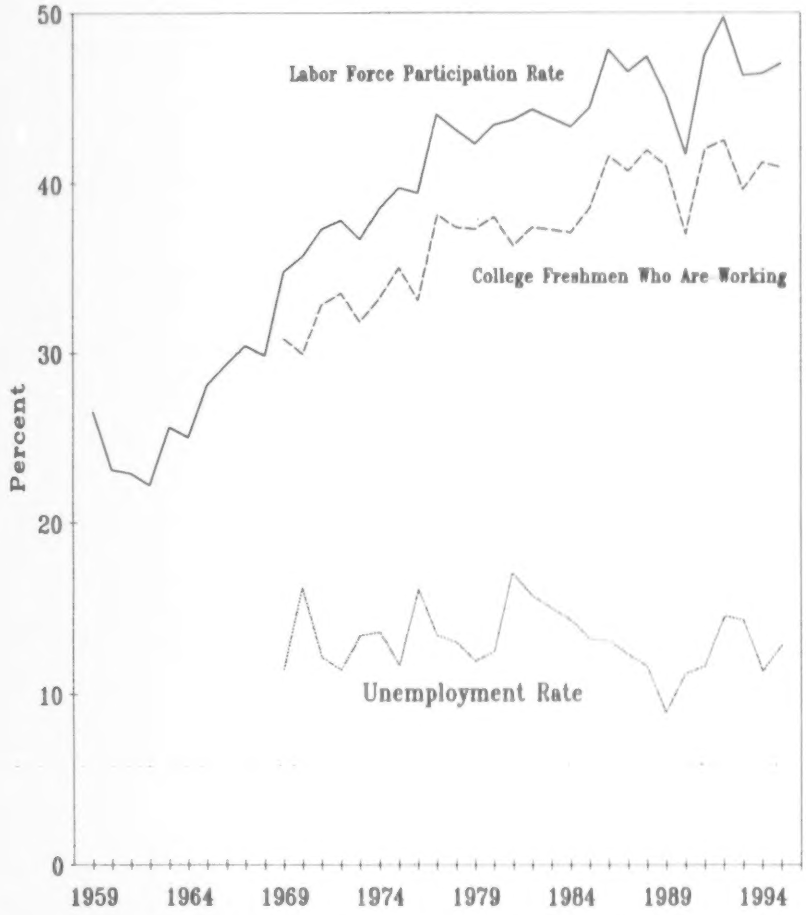
Labor Force Participation

The Bureau of Labor Statistics' tabulation of data from the Current Population Survey includes labor force participation data. Labor force participation includes both employment plus unemployed and seeking employment.

As shown in the chart on the following page, the proportion of these college freshmen who were also in the labor force has increased substantially over time. In the early 1960s about 23 percent of these freshmen were in the labor force, either employed or unemployed. This proportion grew rapidly during the 1960s and through most of the 1970s to about 43 percent. Since then it has continued to grow, albeit more slowly, to 47 percent by 1995.

Data on the proportion of college freshmen who were actually employed has been reported since 1969, when 30.8 percent of these college freshmen were also employed in the labor force. Quite likely, a decade earlier, about 20 percent had been employed while enrolled in college. But by the mid 1980s the rate had risen to about 41

Labor Force Participation of College Freshmen Who Were Recent High School Graduates 1959 to 1995



percent where it has remained through 1995.

Among 1995 college freshmen who were recent high school graduates, the proportions employed while enrolled were:

Part-time	73.9%
2-year college	53.4%
White	43.5%
Women	42.4%
Men	39.4%
Full-time	37.3%
4-year college	34.3%
Black	30.5%
Hispanic	25.7%

Among college freshmen who are also in the labor force, the unemployment rate was 12.8 percent in 1995. Between 1969 and 1995 this rate ranged between 9 and 17 percent, and generally was close to 12 to 13 percent. Among the above classifications of college freshmen, the unemployment rate was highest for blacks, 2-year college freshmen and men, and lowest among freshmen in 4-year colleges, full-time students, whites and women.

Non-Continuers

In the October 1995 CPS, there are two groups who were in high school during 1994-95 but have departed the education system, at least temporarily: high school dropouts, and high school graduates who did not continue on into college. The size of these two groups nearly equals the number of college freshmen.

By October 1995, 990,000 persons who had graduated from high school in 1995 were not in college. 625,000 had jobs, 165,000 were looking for work, and 200,000 were neither in college, working, nor looking for work. Males were 47 percent of the total, and the racial/ethnic breakdown of the total was 79 percent white, 17 percent black and 13 percent Hispanic (Hispanics may be of any race).

At the same time, 604,000 persons were high school dropouts. They had dropped out of school between October 1994 and October 1995. Dropouts could be between 16 and 24 years of age. Of this total, 288,000 had jobs, 121,000 were looking for work, and 195,000 were not either in school or the labor force.

Summary

By far the most important finding in this analysis is the changing sources of growth in freshmen enrollments among recent high school graduates. Between 1973 and 1991 the rate at which high school graduates continued their studies in college increased sharply. That stopped in 1991, and for the last five years this rate has remained flat. Since 1991 college freshmen enrollments have continued to grow, but only because the echo of the post World War II baby boom has arrived at high school graduation and those numbers are increasing. Ominously, despite the growing private returns to a college education compared to a high school diploma, the rate of college enrollment among recent high school grads has stopped growing for the last five years.

Is this representative government?

Voting Rates by Educational Attainment

The founding fathers of the United States--Jefferson, Rush and others--believed that the expansion of educational opportunity was necessary to create an informed public opinion to protect newly won freedoms that might otherwise be lost through a passive or ignorant citizenry.

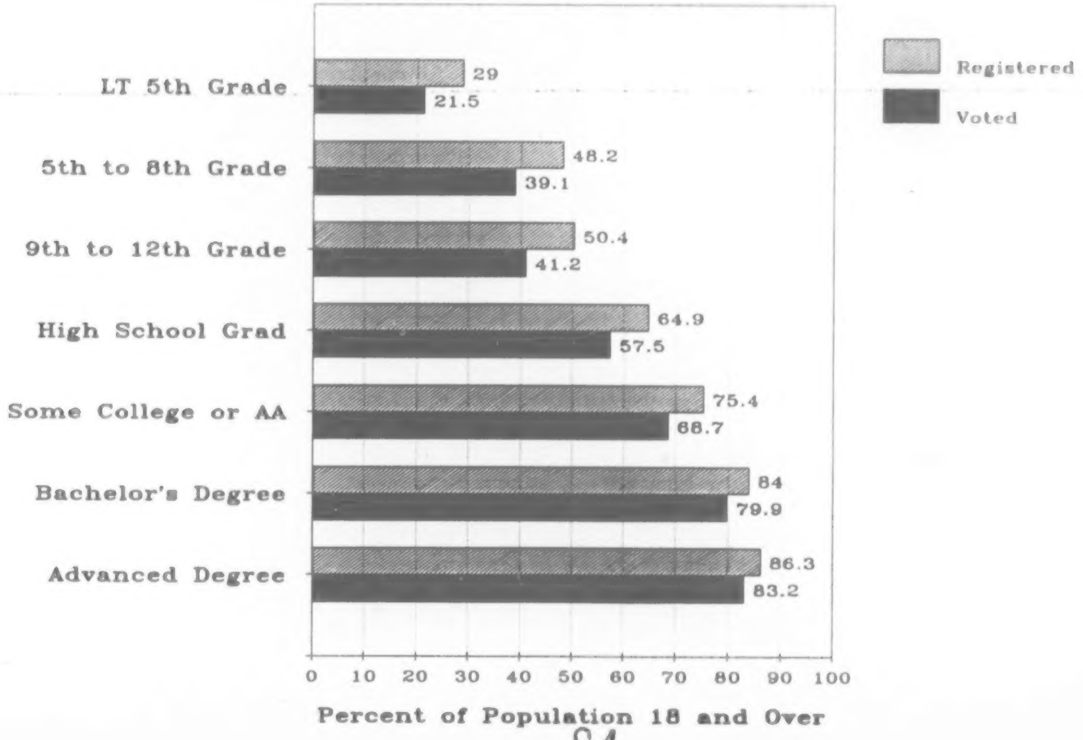
Nineteenth century educational reformers, such as Horace Mann of Massachusetts and Henry Barnard of Connecticut, worked to establish public schools to provide common education for all citizens. Their arguments extended those of the country's founders. The reformers held that education could transform all youth into literate, virtuous citizens and could build a distinctive new society. Furthermore, the reformers appealed to citizens' concerns about growing tensions and conflicts in American society, arguing that common schooling available to all would preserve social stability and prevent crime and poverty.

Efforts to expand educational opportunity have been enormously successful with all states passing compulsory school attendance laws by 1918. Those efforts have been extended to higher levels of educational attainment, as documented in this issue of OPPORTUNITY. Recently President Clinton has called for universal education through the first two years of college, and proposed incentive funding for students and families toward this end.

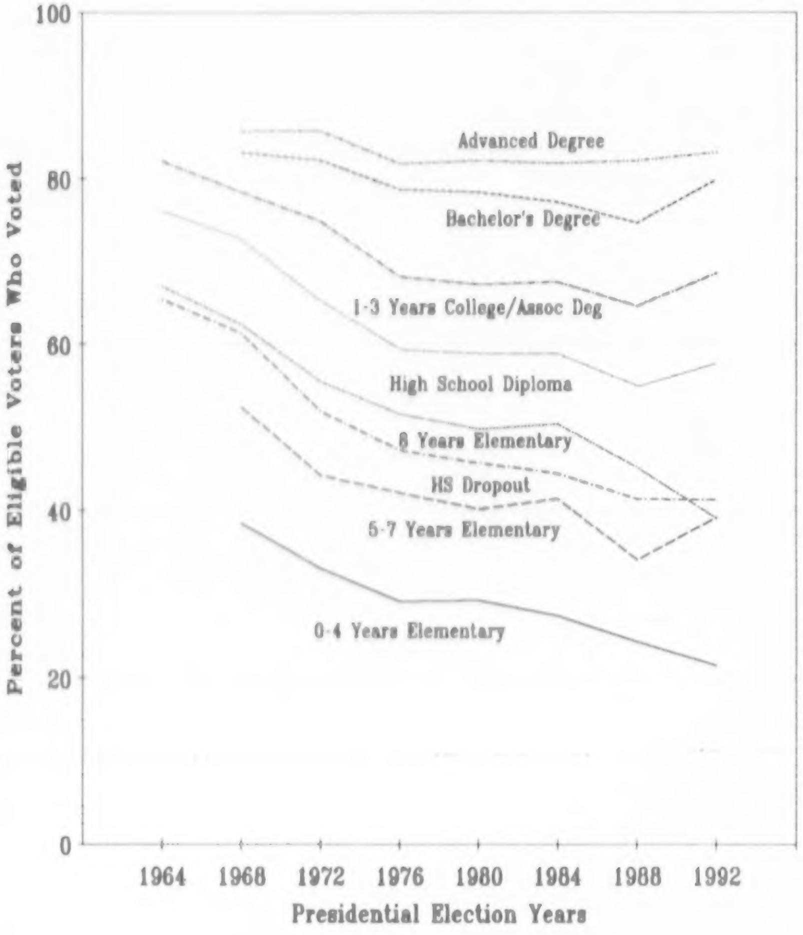
However, disparities in educational attainment persist. These disparities in educational attainment that remain with us today are closely tied to disparities in the representativeness of elected government. If representative government reflects the interests of those who vote, then the November 1996 elections can be expected to reflect the interests and concerns of many college educated voters.

- *Those who are college educated register and vote at far higher rates than do those who have no college education.*

Voting and Registration by Educational Attainment in the 1992 Presidential Election



Voting Rates in Presidential Elections
by Educational Attainment
1964 to 1992



- *Moreover, in the 1992 presidential election, the disparity in voting rates between the college-educated and those without college educations widened sharply compared to prior presidential elections.*

In this analysis, we examine patterns and trends in voting in presidential election years to see who votes (and who does not). In particular, we are interested in the registration, voting and political party identification of voters by their educational attainment.

What we find in this analysis is:

- A long-term overall decline in the rate at which Americans vote in presidential elections,
- A large and growing disparity in voting rates across levels of educational attainment,
- Substantial differences in voting rates between the genders and racial/ethnic groups when educational attainment is accounted for, and
- A reduction in party affiliation associated with higher levels of educational attainment.

This analysis ultimately leads us to question the representativeness of elected government in the United States. It also helps explain the broad patterns of reduction in government efforts to extend opportunity for postsecondary education and training to vulnerable populations most in need of it--they don't vote.

The Data

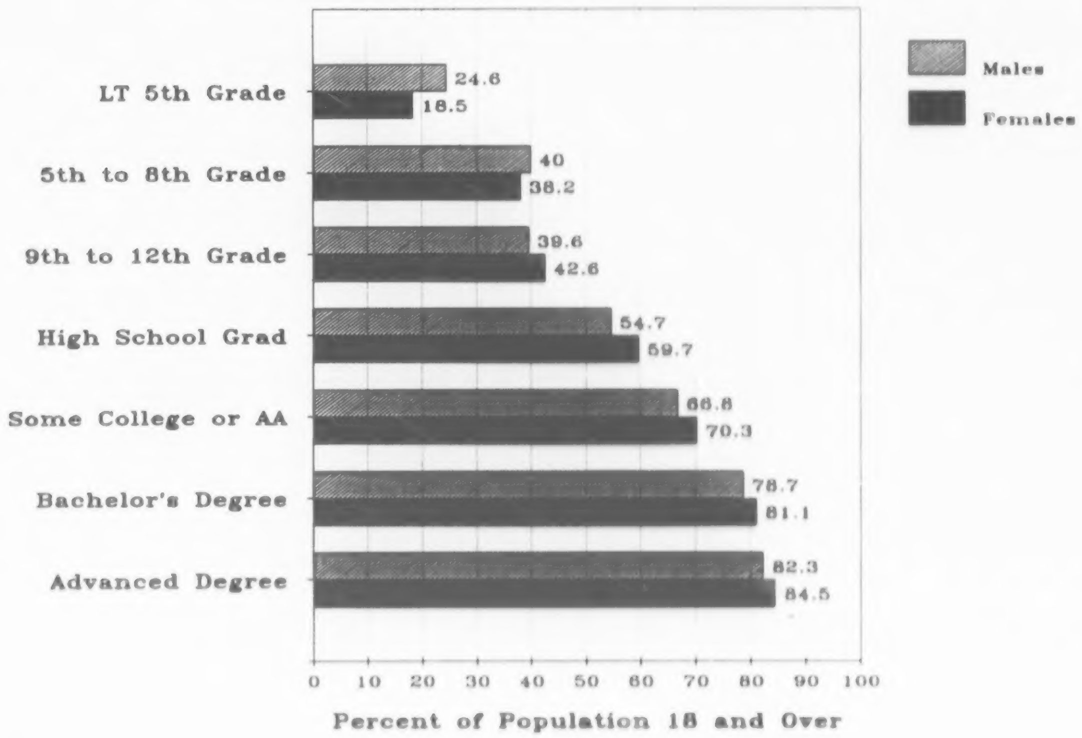
Data used in this analysis are drawn primarily from two sources. The major source of data is the published reports from the Census Bureau's Current Population Survey. These reports have been produced after every biennial national election since 1964. The data analyzed and reported here come from the presidential election year reports for 1964, 1968, 1972, 1976, 1980, 1984, 1988 and 1992.

Jennings, J. T. (1993.) *Voting and Registration in the Election of November 1992.* Current Population Reports, P20-466. Washington, DC: U.S. Bureau of the Census.

The Census Bureau report notes an important flaw in its data: more Current Population Survey respondents reported voting in the 1992 elections than there were ballots cast as counted by the Committee for the Study of the American Electorate. The Committee's preliminary report counted 104.4 million votes cast, while CPS respondents reported that 113.9 million had voted. This discrepancy for 1992 is similar to discrepancies reported for each of the presidential elections since 1964.

The discrepancy of 9.5 million votes has partial explanations: 1) some who vote do not vote in the presidential election, but may vote in other elections on the ballot; 2) some who reported voting in the CPS may not

Voting by Educational Attainment and Gender in the 1992 Presidential Election



have done so perhaps they felt it was a lapse in civic responsibility or because household respondents incorrectly reported on the voting behavior of other household members. Despite this flaw, we will use the CPS data as reported by the Census Bureau.

The second source of data used later in this analysis is on political party identification. These data were collected and published by the Center for Political Studies at the University of Michigan.

Registration and Voting

At the time of the 1992 presidential election, there were 185,684,000 Americans age 18 and over. Of these, 126.6 million were reported registered, and 113.9 million reported voted. That is, 68.2 percent of those 18 years and over were reported registered, and 61.3 percent reported voted.

Since these data were first reported in 1964, the proportion of the population voting has generally declined:

1964	69.3%
1968	67.8%
1972	63.0%
1976	59.2%
1980	59.2%
1984	59.9%
1988	57.4%
1992	61.3%

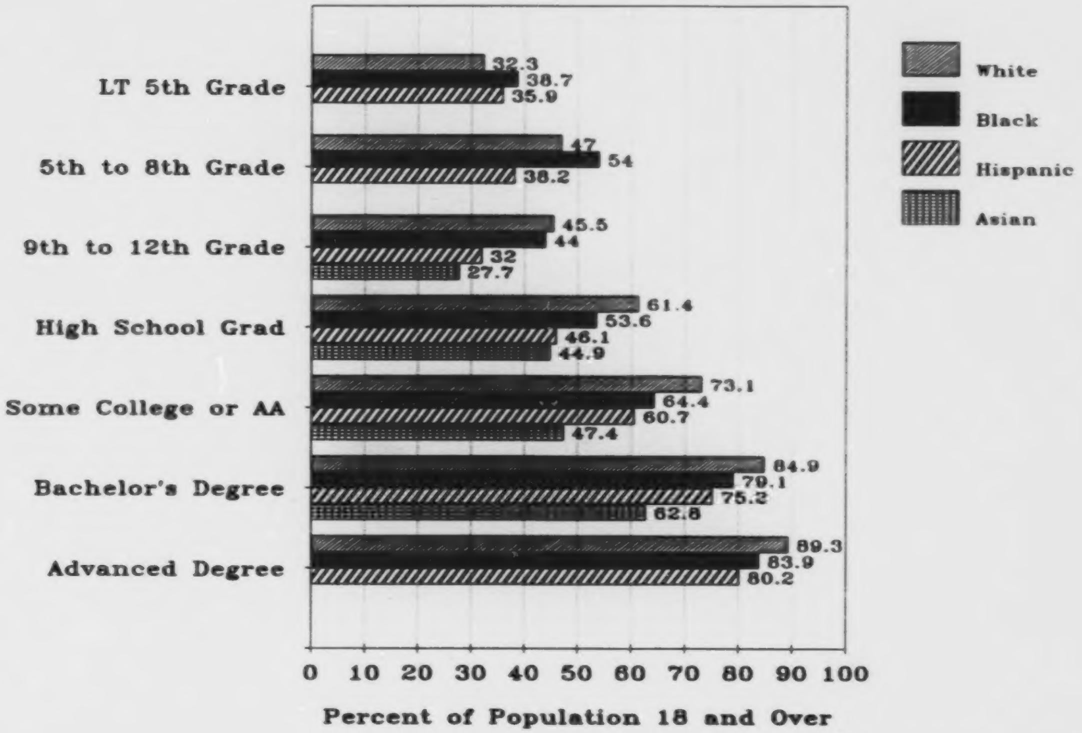
The aggregate data, however, belies significant differences in voting rates among different groups within the population, to wit:

- Women voted at a rate of 62.3 percent, compared to 60.2 for men, in the 1992 election.
- By age voting rates were lowest among 18 and 19 year olds at about 37 percent, and climbed with age to a peak of 78 percent among those 66 years old.
- Whites voted at the rate of 63.6 percent, compared to 54.0 percent for blacks and 28.9 percent for Hispanics.
- By regional divisions in the U.S., voting rates were:

West North Central	70.0%
New England	68.3%
Mountain	66.2%
East North Central	66.0%
East South Central	60.0%
West South Central	59.2%
Middle Atlantic	58.7%
South Atlantic	58.6%
Pacific	56.0%

- By state, voting rates ranged from 75.3 percent in **Wisconsin** to 52.8 percent in **California**.

For our purposes here, however, we



Voting by Educational Attainment and Race/Ethnicity in the 1992 Presidential Election

are mainly interested in voting rates by educational attainment. That data is shown in the chart on page 9. In the 1992 presidential elections, voting rates ranged from 21.5 percent of those with less than a fifth grade education, to 83.2 percent of those with advanced degrees from universities. Both voter registration and reported voting increased--significantly--with educational attainment.

Between 1964 and 1992, while voting rates have declined at all levels of educational attainment, the decline has been greatest among those with least education. These data are plotted in the chart on page 10. Here we compare voting rates in 1968 (for reasons of data definition comparability) with those of 1992:

	Change
Advanced degree	-2.5%
Bachelor's degree	-3.2%
Some college/associate degree	-9.7%
High school graduate	-15.0%
High school dropout	-20.1%
5th to 9th grade	-27.2%
Less than 5th grade	-16.9%

For both men and women, the same general correlation between educational attainment and voting rates holds. By gender, women were more likely than men to have reported voting in the 1992 election. This was true for all but the very lowest levels of educational attainment, as shown in the chart on the previous page. The greatest difference between male and female voting rates was among high school graduates.

We have recalculated the Census Bureau's published data on voting rates. The particular problem is that people who are not citizens are included in the Census Bureau's population of residents 18 years old and over. For Hispanics and Asians in particular, there are very large proportions of the adult population that are not citizens, and therefore are ineligible to vote. Thus, the voting rates shown in the chart on this page are voting rates for U.S. citizens.

Because of small sample size issues, the voting rates for Asians are abbreviated. The voting rate shown for Asians who have 9th to 12th grade educations is actually for all who are not high school graduates. The voting rate for Asians with bachelor's degrees is actually for all Asians with a bachelor's degree or higher.

At most levels of educational attainment, whites voted at the highest rates in the 1992 presidential election. Whites were followed by blacks, then

Hispanics. At all levels of educational attainment, Asians voted at the lowest rates in 1992.

Political Party Identification

Between 1972 and 1994, the Center for Political Studies at the University of Michigan has studied political party identification. These studies have sampled citizens of voting age living in private housing units in the contiguous United States. The purpose has been to determine the political party identification and degree of party attachment of voters with different characteristics.

Between 1972 and 1992, the proportion of adults identifying themselves as strong, weak or independent Democrats has hovered between 48 and 52 percent. In 1994 this dropped to 47 percent. The proportion of adults identifying themselves as strong, weak or independent Republicans has ranged from 33 to 41 percent, then rose to 43 percent in the 1994 election.

Generally those with grade school educations were most likely to identify with the Democrats--59 percent. At higher levels of education voters grow more likely to identify with Republicans. Among those with college educations, 43 percent tended to identify with Democrats while 50 percent identified with Republicans in the 1994 election.

Other populations and their political party identification in 1994 were:

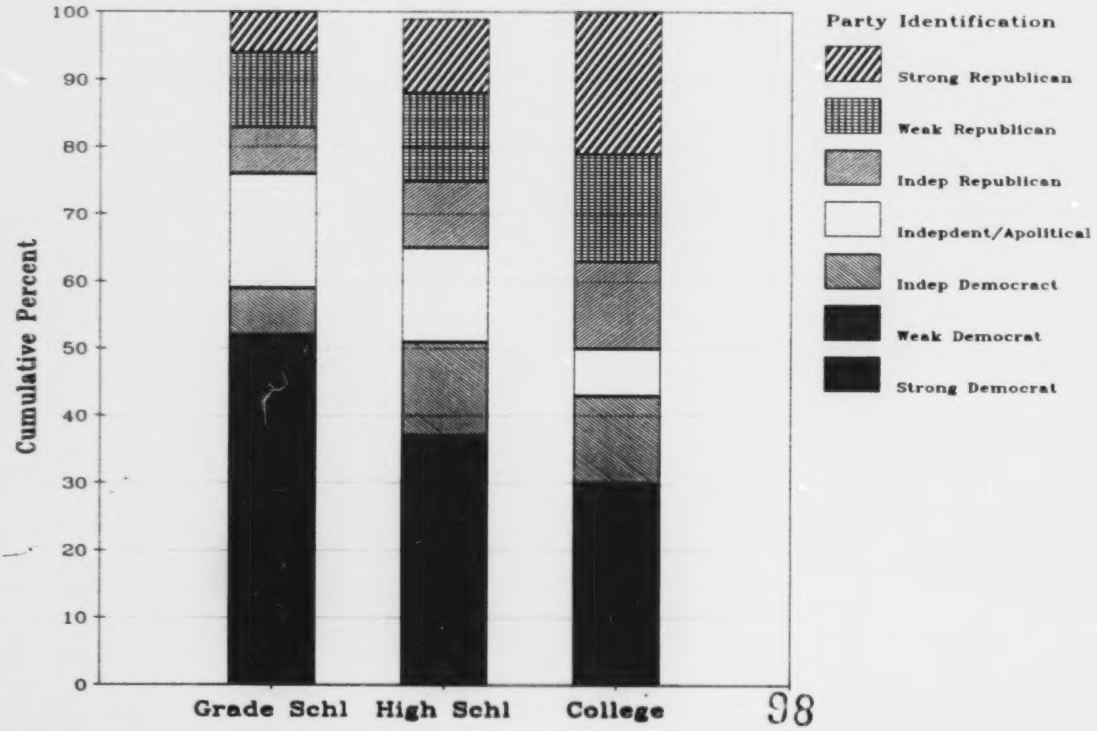
	Democrat	Republican
Whites	43%	46%
Blacks	81%	9%
Males	42%	46%
Females	52%	37%
17-24 years	51%	37%
25-34 years	44%	43%
35-44 years	45%	43%
45-54 years	46%	45%
55-64 years	48%	43%
65-74 years	51%	42%
75-99 years	54%	35%

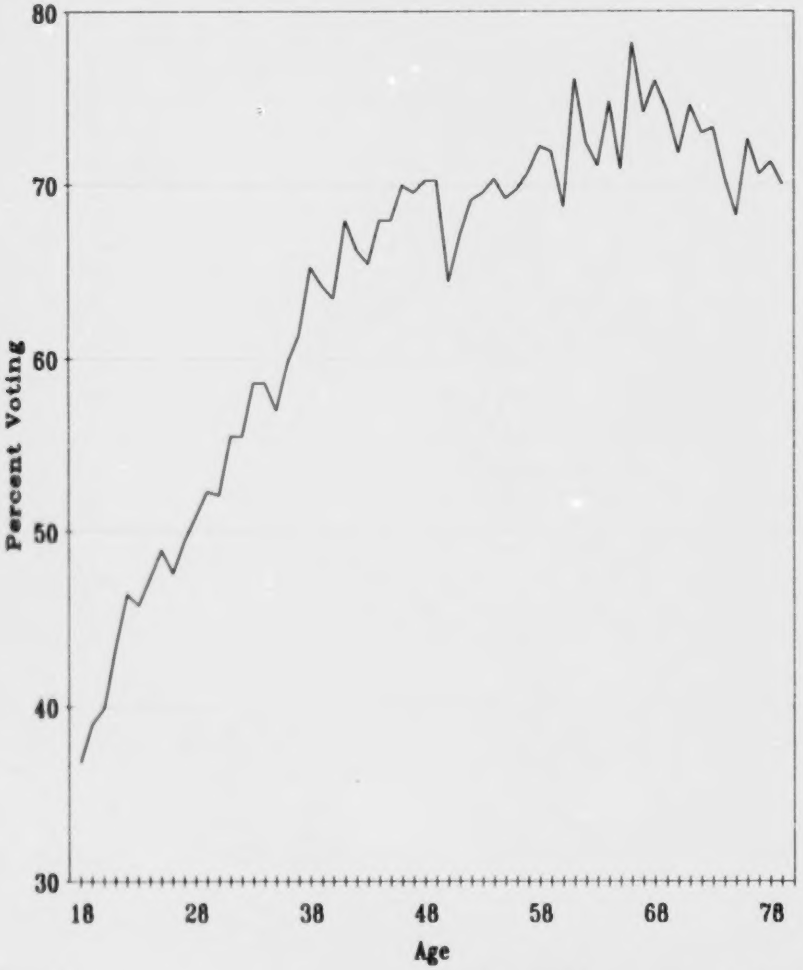
Age

Finally, because higher education tends to provide educational services to the younger end of the age distribution of adults/voters, we have plotted the rates at which adults of different ages voted in the 1992 presidential election. The results are shown in the chart on the following page.

Youngest voters--typically college undergraduates--voted in 1992 at the lowest rates of any age group. Among 18 year olds, for example, 37.9 percent of the population voted. At age 19 this dropped to 36.8 percent--the lowest for any single year

Political Party Identification of Adults by Education
1994





Voting Rates by Age
1992

of age.

Voting rates increase rapidly with age, to about 70 percent by age 48, then more slowly, to a peak of 78.2 percent at age 66. Even among those 85 years and over, 52 percent vote--far above the voting rate of traditional college-age young adults.

Summary

At the time of the 1992 presidential election, the population of the United States was 255,407,000.

- 185,684,000, or 72.7 percent of the population, were age 18 and over.
- 113,866,000, or 44.6 percent of the population, reported that they voted in the election.
- 104,425,000, or 40.9 percent of the population, officially voted in the presidential election.
- 44,909,000, or 17.6 percent of the population, voted for and elected Bill Clinton as president of the United States.

When the president of the United States is selected by less than one person in five, by an electorate that includes just two in five from the population, the observer might ask just how representative of the total population these two voters are. This analysis sought to look at voters, mainly in terms of their educational backgrounds.

This analysis finds that voters are disproportionately from the better educated levels of the adult population. Voting rates and educational attainment are highly correlated. This is true for men and women. It holds for whites, blacks, Hispanics and Asians. It holds across all age levels.

The effect of educational attainment on civic participation is far broader than merely registering and voting in occasional elections. A survey by Independent Sector in 1992 found that 22 percent of those with less than a high school education did community volunteer work, compared to 45 percent of those with high school diplomas, 66 percent of those with some college, and 77 percent of those with a bachelor's degree or more from college.

A survey of influential community leaders by the Roper Organization in 1992 found that 5 percent had less than a high school education, 22 percent were high school graduates, 29 percent had some college and 44 percent had a bachelor's degree or more from college. The college educated were over-represented in community leadership roles, while those with less than a college education were under-represented.

The contribution of education to the functioning of democracy is abundant and clear. Jefferson's prescience is stunning. The issues of governing, involving complex economic trade-offs, moral choices, balancing interests, vision, compassion and tough love, require the knowledgeable electorate and sophisticated leadership Jefferson passionately advocated.

What's right . . . *. . . with the Women*

What's Wrong with the Guys

(continued)

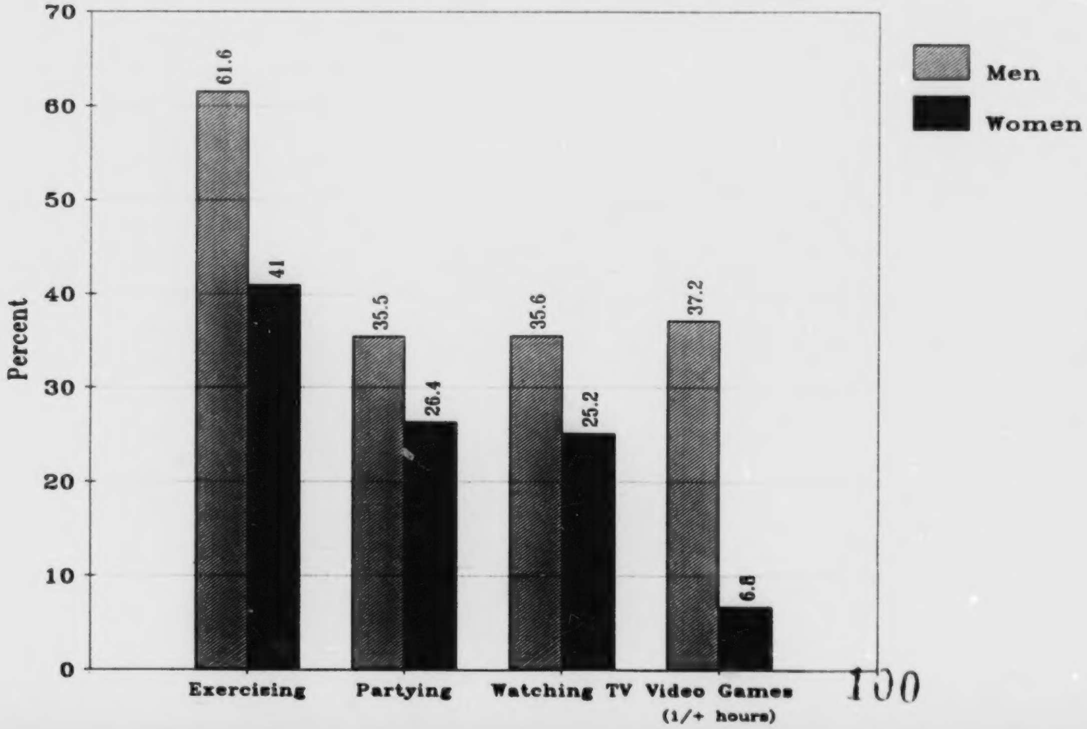
During the last year we have reported on a variety of indicators that suggest that young males are experiencing far greater difficulties in higher education than are young women.

- *Female high school graduation rates surpassed those for males in the mid-1970s. College participation and completion rates are now nearly identical between the genders.*
- *Male college freshmen are far more likely to report learning disabilities than are females.*
- *Between 1980 and 1994, the number of black males enrolled in higher education increased by 85,900, or by 19 percent. The number of black males in jail or prisons increased by 469,900, or by 225 percent.*
- *In 1870 85 percent of all bachelor's degrees were awarded to males. 1981 was the last year more bachelor's degrees were awarded to men. By 1993 this had dropped to 46 percent. Extrapolating this trend into the future, the last male to receive a bachelor's degree will occur in the year 2143.*

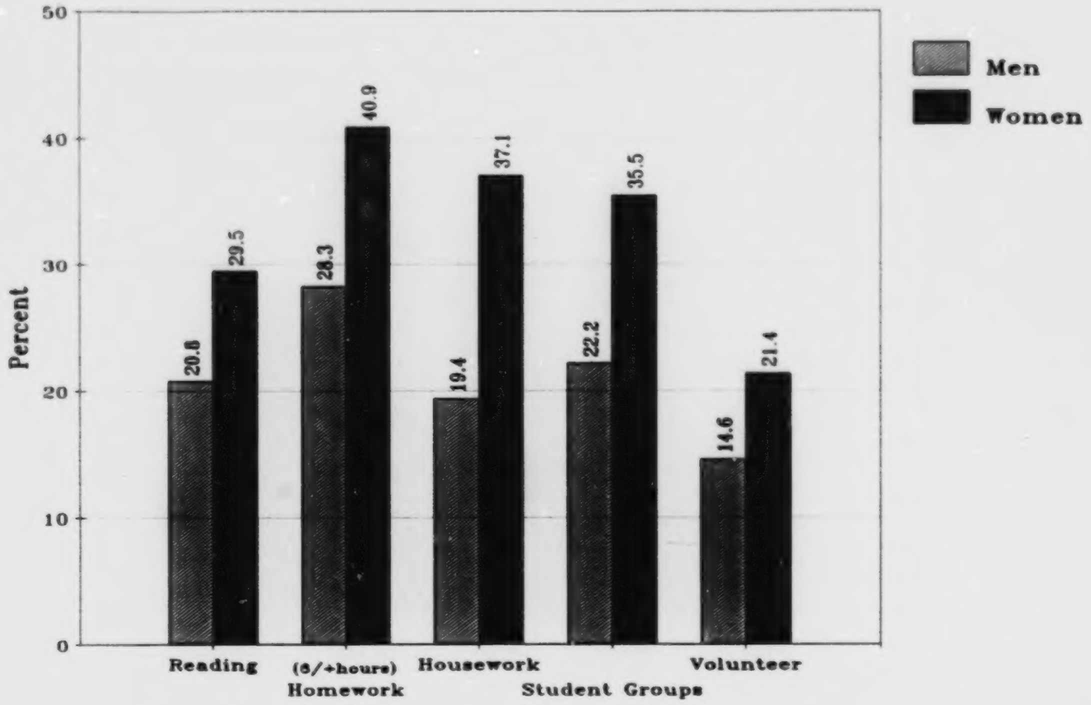
Here we share insight gleaned from the fall 1995 national survey of American college freshmen. The charts below and on the following page highlight differences between freshmen men and women in how they allocate their time. Both men and women spend large blocks of time socializing (77 percent report 6 or more hours per week) and working for pay (63 percent report 6 or more hours per week). After that, allocations vary between males and females.

Males report spending more time on exercising or sports, partying, watching TV, and especially playing video games. Females report spending more time doing housework/child care, studying/doing homework, participating in student clubs and groups, reading for pleasure, talking with teachers outside of class and doing volunteer work. Females were twice as likely as males to report feeling overwhelmed by all they have to do.

Gender Differences in Time Allocation:
How Are Freshmen Men Spending Their Time?
(Percent spending 6 or more hours per week)



**Gender Differences in Time Allocation:
How Are Freshmen Women Spending Their Time?**
(Percent spending 3 or more hours per week)



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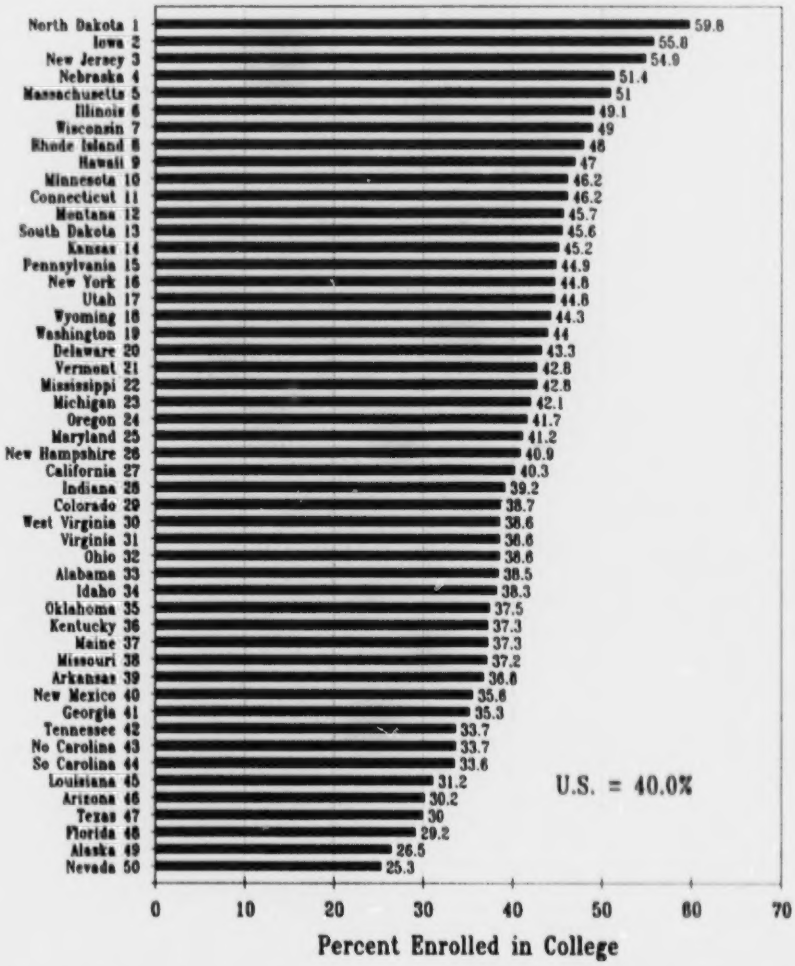
Postsecondary Education OPPORTUNITY

The Mortenson Research Seminar on Public Policy Analysis of Opportunity for Postsecondary Education

Number 49 **Iowa City, Iowa** **July 1996**

Chance for College by Age 19 by State in 1994

Chance for College by Age 19
by State, 1994



College enrollment is essential to acquiring the education and training that qualifies workers for the best paying jobs available in the labor force. College enrollment by age 19 has two preconditions. First, a person must graduate from high school. Then, the high school graduate must enroll in college immediately after high school.

In 1994 just 40 percent of the 19 year olds in the United States had met both conditions and were preparing for the best paid job opportunities. By state, the proportions ranged from nearly 60 percent in North Dakota to just 25 percent in Nevada.

In this analysis we examine high school graduation and college continuation behavior of young adults at a most critical transition of their lives, from free and compulsory school enrollment to expensive and voluntary college enrollment.

This analysis focuses on the states. At the extremes, young adults (about age 19) are twice as likely to be enrolled in college in some states (such as North Dakota, Iowa, New Jersey, Nebraska and Massachusetts) as they are in others (such as Nevada, Alaska, Florida, Texas and Arizona.)

These differences reflect differences between the states in the rates at which ninth graders graduate from high school. They also reflect differences between the states in the rates at which high school graduates continue their studies in college immediately after high school. Some states graduate high school students at low rates, but then send many of those who do graduate on to college. Other states have higher high school graduation rates but send relatively fewer on to college immediately after high school.

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At the extremes, those states that have high proportions of their 19 year olds enrolled in college have both high graduation rates from high school and high college continuation rates for those that complete high school. At the other extreme, states with small proportions of 19 year olds enrolled in college have both low high school graduation rates and low college continuation rates for those who complete high school. In between the picture is mixed with differing combinations of high and low or simply middling high school graduation and college continuation rates.

Our analysis of the 1994 data here updates and extends our previous analyses of 1986 and 1988 data reported in **OPPORTUNITY** in January 1993 (#9) and of 1992 data reported in **OPPORTUNITY** in November 1994 (#29).

The Data

The concept for this analysis is straightforward:

High school graduation rate
x College continuation rate
= Chance for college

To be enrolled in college by age 19 a person must have both graduated from high school and then enrolled in college in the fall following high school graduation. In this analysis both events must have occurred in 1994.

The data used in this analysis have several important qualifications that are explained below. The data sets used in this analysis are all collected and reported by the National Center for Education Statistics.

High school graduation rates by state are calculated by dividing the number of regular public high school graduates for 1993-94 by public ninth grade membership in 1990-91.

"Public School Student, Staff, and Graduate Counts by State, School Year 1994-95." (May 1996.) NCES 96-300. Washington, DC: National Center for Education Statistics, US Department of Education.

Note that these rates do not include private high school graduates. The reason is simply that ninth grade private school enrollments by state are not collected by NCES, and therefore private high school graduation rates cannot be calculated for the states.

The exclusion of private high school graduation rate data is a more important qualification in those states with substantial proportions of their graduates produced from private high schools. Nationally, private high schools produced 10 percent of all high school graduates in 1993. The states where private graduates comprised the largest proportions of high school graduates, and where public high school graduation rates are less representative of state high school graduation rates, are:

Delaware	20.8%
Connecticut	19.0%
Louisiana	18.9%
Vermont	17.7%
Hawaii	17.6%
Massachusetts	17.5%
New York	16.7%
Rhode Island	15.6%
Pennsylvania	15.2%

Generally western states have the smallest private high school graduation proportions of state totals. In Wyoming, there were just 31 private high school graduates compared to 6174 from public high schools (0.5%).

College continuation rates for recent high school graduates are calculated for each state by dividing the number of fall 1994 college freshmen from each state by the number of 1994 high school graduates from each state.

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Mission Statement

This research letter is founded on two fundamental beliefs. First, sound public social policy requires accurate, current, independent, and focused information on the human condition. Second, education is essential to the development of human potential and resources for both private and public benefit. Therefore, the purpose of this research letter is to inform those who formulate, fund, and administer public policy and programs about the condition of and influences that affect postsecondary education opportunity for all Americans.

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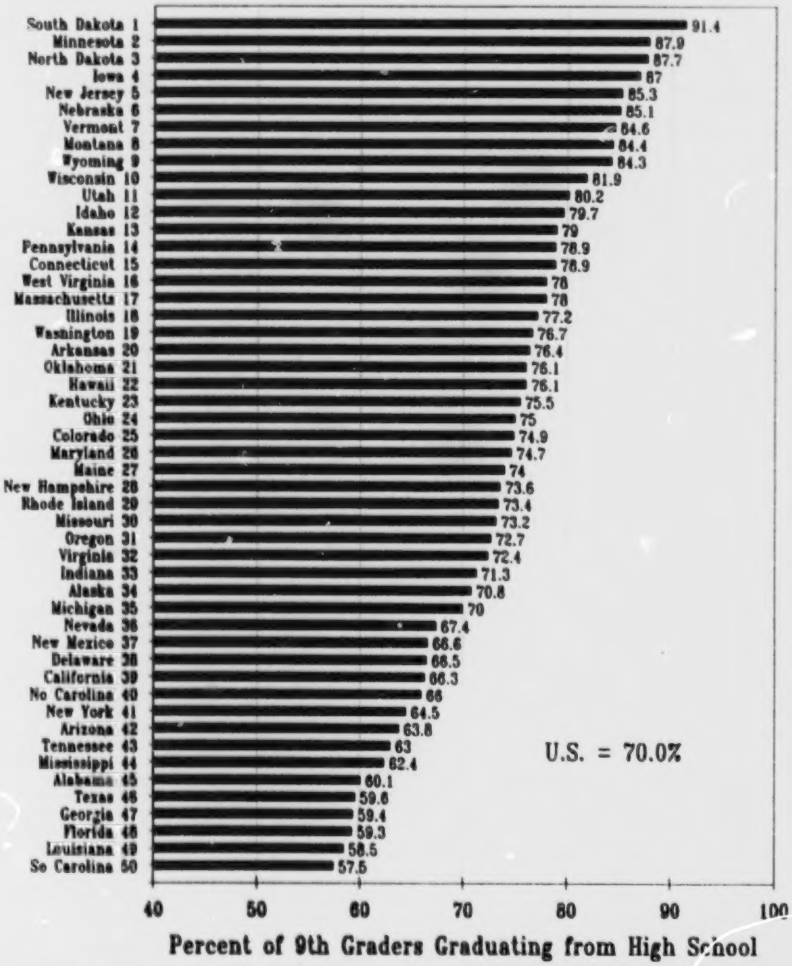
Public High School Graduation Rates By State, 1994



The number of fall 1994 college freshmen who graduated from a public or private high school in a given state is the sum of those enrolled in colleges in their home state plus those emigrating and enrolled in colleges in other states. These data were collected in the fall 1994 IPEDS enrollment survey and have recently been reported in:

Barbett, S. (March 1996.) "Residence and Migration of First-Time Freshmen Enrolled in Higher Education Institutions: Fall 1994." NCES 96-846. Washington, DC: National Center for Education Statistics, US Department of Education.

The number of 1994 public high school graduates for each state has been collected and reported by NCES in the *1995 Digest of Education Statistics*. The number of private high school graduates for each state has been estimated by NCES for 1993, and we use the 1993 private high school graduate data for each state in this analysis. These data too appear in the *1995 Digest of Education Statistics*.

Prior to the 1993 NCES estimates of private high school graduates by state, our analyses for 1986, 1988 and 1992 used estimates prepared by OPPORTUNITY from other NCES and Census Bureau data. Our estimates were quite close to the more recent NCES effort, but here we will use the NCES estimates rather than rely on our estimates based on extrapolations of historical data.

Public High School Graduation Rates

For the 1993-94 school year, there were 2,217,175 regular graduates from public high schools in the United States. In 1990-91 there had been 3,168,630 students counted as ninth grade membership. Thus, the public high school graduation rate was 70.0 percent in 1994.

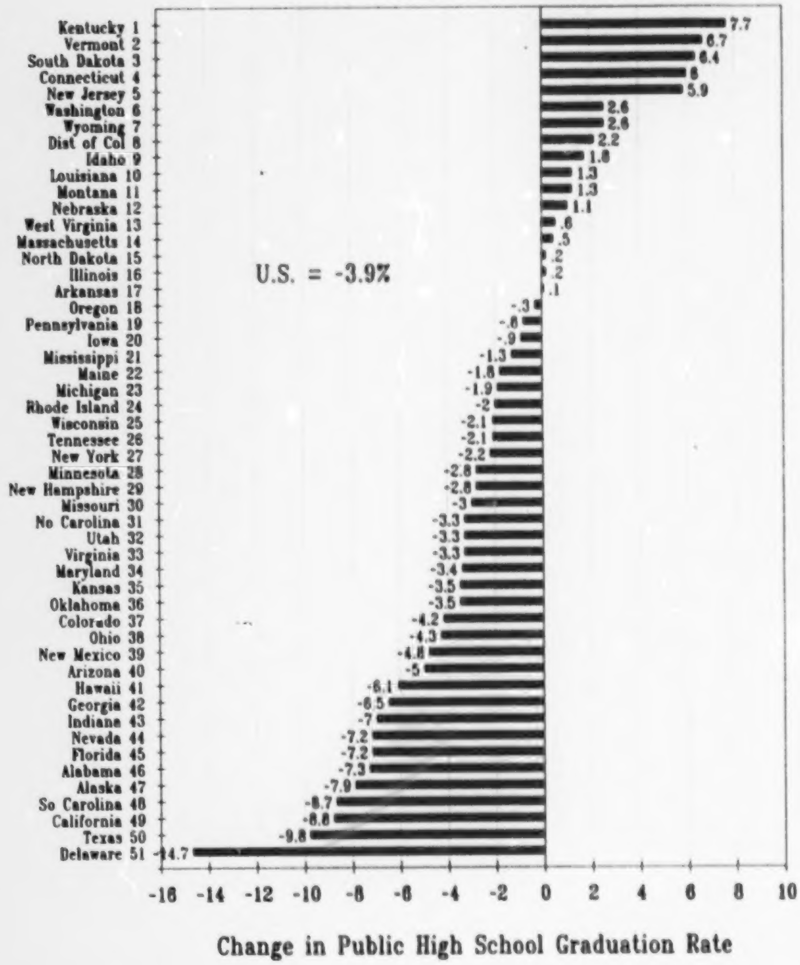
Across the states, the public high school graduation rates ranged from a low of 57.5 percent in **South Carolina** to a high of 91.4 percent in **South Dakota**. Generally, most of the states with below-average public high school graduation rates were in the South, although **New York** and **California** also had below-average public high school graduation rates.

The ten states with the highest public high school graduation rates were all northern states, with a clear concentration in the upper Midwest.

Over the years since 1986 that **OPPORTUNITY** has reported on chance for college by state and calculated public high school graduation rates by state, the national public high school graduation rate has consistently declined. This decline began after 1983:

1981	72.1%
1982	73.1%
1983	73.9%

Change in Public High School Graduation Rates by State Between 1983 and 1994



1984	73.8%
1985	73.4%
1986	73.3%
1987	72.9%
1988	72.7%
1989	71.5%
1990	71.2%
1991	71.2%
1992	71.2%
1993	71.1%
1994	70.0%

If, for example, the 1990-91 ninth graders had graduated in 1994 at the peak 1983 rate, about 124,000 more would have graduated in 1994 than actually did so. And of the total decline of 3.9 percentage points between 1983 and 1994, by far the largest single year decline occurred between 1993 and 1994--1.1 percentage points.

The decline in the public high school graduation rate represents loss in both private and social welfare as well as likely increased social program costs as these dropouts will almost certainly fail to secure jobs at decent wages in the labor force. Moreover, this decline is inconsistent with the national educational goal to increase the high school graduation rate to 90 percent by the year 2000.

Moreover, the decline in public high school graduation rates across the states is broadly based. Between 1992 and 1994 in only 12 states plus the District of Columbia did public high school graduation rates increase. In the remaining 38 states the rates decreased. The largest decrease was in **Arizona**, where the public high school graduation rate dropped from 72.7 percent in 1992 to 63.8 percent in 1994. Very large declines in the public high school graduation rate during this 2-year period were also calculated for **Maine, Alabama, Tennessee** and **Florida**.

The chart on this page takes a longer term view of the decline in public high school graduates, between the peak year of 1983 and the most recent year of 1994. Seventeen of the 50 states plus the District of Columbia had increases in public high school graduation rates. In five of these states, gains were more than five percent. These states included **Kentucky** (+7.7%), **Vermont** (+6.7%), **South Dakota** (+6.4%), **Connecticut** (+6.0%) and **New Jersey** (+5.9%).

At the other end of the scale, public high school graduation rates declined between 1983 and 1994 in 34 states. In **Delaware** the decline was greatest, dropping from 81.2 percent in 1983 to 66.5 percent by 1994--a loss of 14.7 percent. Delaware moved from far above the national average in 1983, to well below the national average by 1994.

Delaware was not alone, however. Other states with losses in public high school graduation rates of 5 percent or more were **Texas** (-9.8%), **California** (-8.8%), **South Carolina** (-8.7%), **Alaska** (-7.9%), **Alabama** (-7.3%),

Florida (-7.2%), **Nevada** (-7.2%), **Indiana** (-7.0%), **Georgia** (-6.5%), **Hawaii** (-6.1%) and **Arizona** (-5.0%).

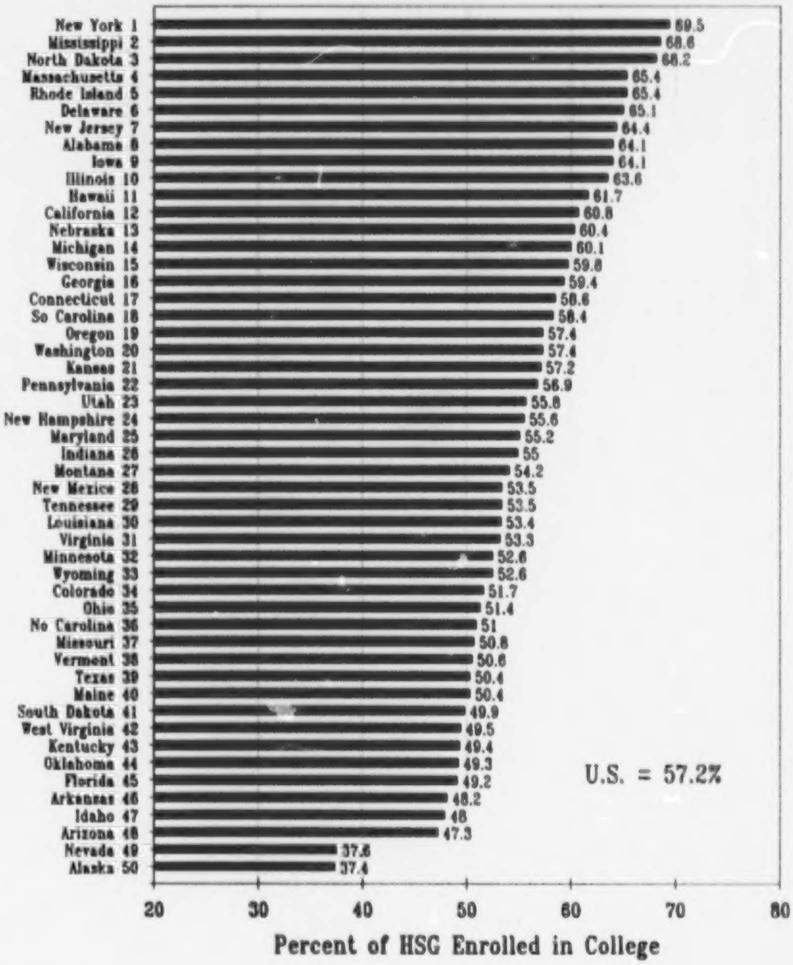
College Continuation Rates

To be enrolled in college by age 19 a person must both graduate from high school and continue their formal studies in college immediately after high school graduation. The college continuation rate calculated and reported here is the proportion of high school graduates that are enrolled in college the following fall.

To perform this calculation by state we need to know the numbers of both public and private high school graduates, as well as the number of recent high school graduates enrolled in higher education both within the state and in institutions in other states. For this calculation we have used high school graduate data for public high school graduates for 1994, and private high school graduates for 1993, as reported by the National Center for Education Statistics. (NCES estimates private high school graduates by state for odd-numbered years.) The college freshmen data are for 1994 and were collected in the NCES IPEDs residence and migration enrollment surveys.

In 1995 the college continuation rate for recent high school graduates was 57.2 percent. That is, of the 2,466,181 public and private high school graduates in 1994, 1,409,517 were enrolled in a collegiate institution somewhere in the United States in the fall of 1994.

College Continuation Rate
by State, 1994



Across the states, college continuation rates varied widely in 1994. **New York** led the states with a continuation rate of 69.5 percent. (New York also led the states in 1992 with a college continuation rate of 66.9 percent.) Other states with college continuation rates more than five percent above the national average were **Mississippi** (68.6%), **North Dakota** (68.2%), **Massachusetts** (65.4%), **Rhode Island** (65.4%), **Delaware** (65.1%), **New Jersey** (64.4%), **Alabama** (64.1%), **Iowa** (64.1%) and **Illinois** (63.6%). (Note that not all of these states also have high high school graduation rates. It could be relatively easier for a state to have a high college continuation rate if high school students were sorted into college preparation and drop-out tracks.)

At the other extreme, two states stand out by their very low college continuation rates: **Alaska** and **Nevada**. About 37 to 38 percent of their 1994 high school graduates were reported enrolled in college somewhere in the United States in the fall of 1994.

These two states also ranked last in 1992. Nevada made modest progress between 1992 and 1994 while Alaska fell backward from 49th to 50th rank among the states.

Eight other states sent less than half of their 1994 high school graduates on to college in the fall of 1994: **Arizona, Idaho, Arkansas, Florida, Oklahoma, Kentucky, West Virginia and South Dakota.**

Between 1992 and 1994, the college continuation rate for all states increased by 3.6 percent, from 53.6 to 57.2 percent. Increases occurred in 35 states, while decreases occurred in 14 others. (We have not calculated changes for Kentucky and the District of Columbia because of apparent data problems, for Kentucky in 1992 and for the District in 1994.)

Between 1986 and 1994 the college continuation rate using state-reported data has shown steady and substantial increases from one reporting year to the next. A portion of this increase must be attributed to improvements in institutional reporting on the residence and migration portion of the federal IPEDS enrollment report that institutions complete each even-numbered year.

As shown on the following page, wide fluctuations in calculated college continuation rates occur in some states. For example, the University of Maine did not complete the key IPEDS tables for 1986 and 1988, but has since done so. Other states with apparent data problems include Colorado (1986), Kentucky (1992), District of Columbia, New York, Rhode Island and Utah.

Overall, the reporting pattern appears to be improving, and that improvement combined with careful NCES editing means more recent college continuation rates for the states are generally better than data from the 1980s. However, even in 1994 the college continuation rate using state data is 57.2 percent, compared to 61.9 percent as reported by the Bureau of Labor Statistics from data collected in the Current Population Survey.

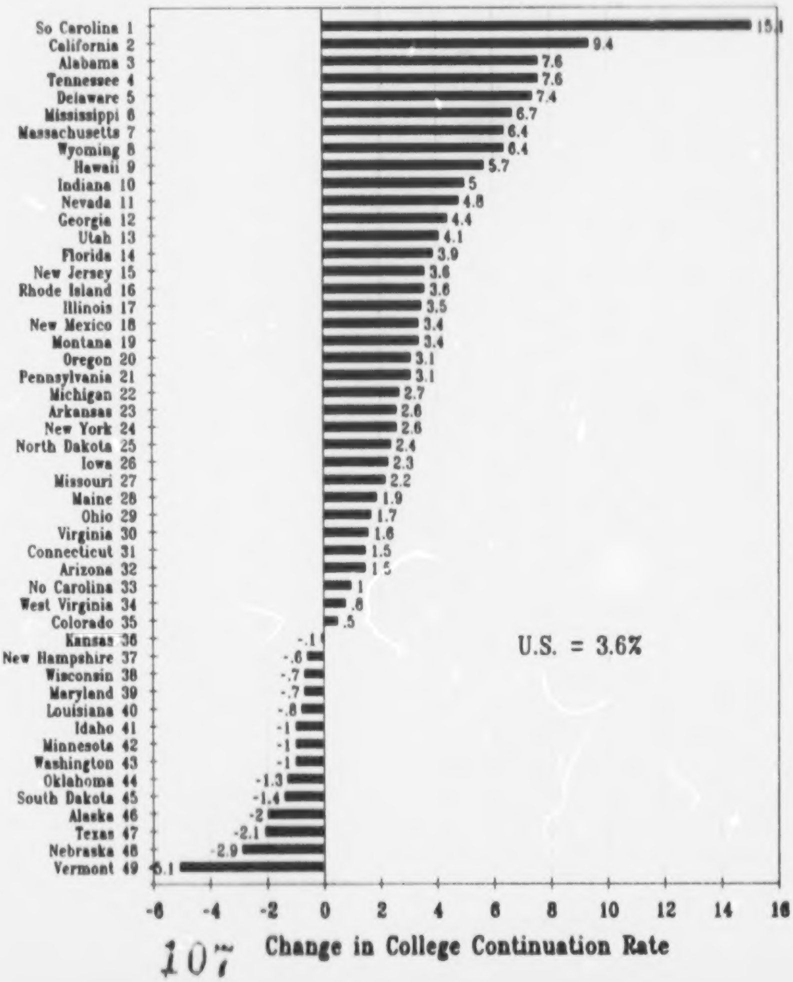
The largest gainers between 1992 and 1994 were **South Carolina** (+15.1%, real gain or data problem?), **California** (+9.4%, recovering from early 1990s dip), **Alabama** (+7.6%, very large gains since 1986, magnified by substantial declines in public high school graduation rate), **Tennessee** (+7.6%) and **Delaware** (+7.4%, large gains in the 1990s, partly emphasized by declining public high school graduation rate).

The largest losers between 1992 and 1994 were **Vermont** (-5.1%, emphasized by increasing high school graduation rates and apparent funding problems with high tuition/modest financial aid model), **Nebraska** (-2.9%), **Texas** (-2.1%) and **Alaska** (-2.0%). The college continuation rates in each of these states dipped in 1994, following good growth between 1986 and 1992.

Chance for College by Age 19

The product of high school graduation rates and college continuation rates is the proportion of each state's population age 19 that is enrolled in college somewhere. For 1994 that data is charted on the first page of this

Change in College Continuation Rates
by State Between 1992 and 1994



issue of **OPPORTUNITY.**

In 1994 **North Dakota** led all states with 59.8 percent of its 19 years olds enrolled in college. Eighty percent of its freshmen were enrolled in North Dakota colleges, and 20 percent left the state and were reported enrolled elsewhere. The first place ranking was the result of ranking third among the states in both public high school graduation rates and college continuation rates for those that graduated from high school. North Dakota also ranked first in our 1992 study with 57.6 percent of its 19 year olds enrolled in college. In 1988 North Dakota ranked third among the states, with 50.4 percent of its 19 years olds in college.

Second place went to **Iowa**, with 55.8 percent of its 19 year olds in college. Eighty-five percent of its 19 year old freshmen were enrolled in Iowa colleges, and 15 percent left the state for enrollment elsewhere. Iowa's second place rank was the result of ranking fourth among the states on public high school graduation rates and ninth in the college continuation rate. In 1992 Iowa ranked third on the proportion of its 19 year olds enrolled in college, at 54.1 percent. In 1988 Iowa ranked second at 50.0 percent.

Third place went to **New Jersey** with 54.9 percent of its 19 year olds enrolled in college. Fifty-five percent of New Jersey's freshmen attended college in the state, while 45 percent left the state and enrolled elsewhere. New Jersey's public high school graduation rate was fifth among the states, while its college continuation rate was seventh. In 1992 New Jersey ranked fourth among the states on the proportion of its 19 year olds enrolled in college at 51.1 percent.

The remaining states in the top ten are characterized by both high public high school graduation rates and high college continuation rates for those who graduate from high school.

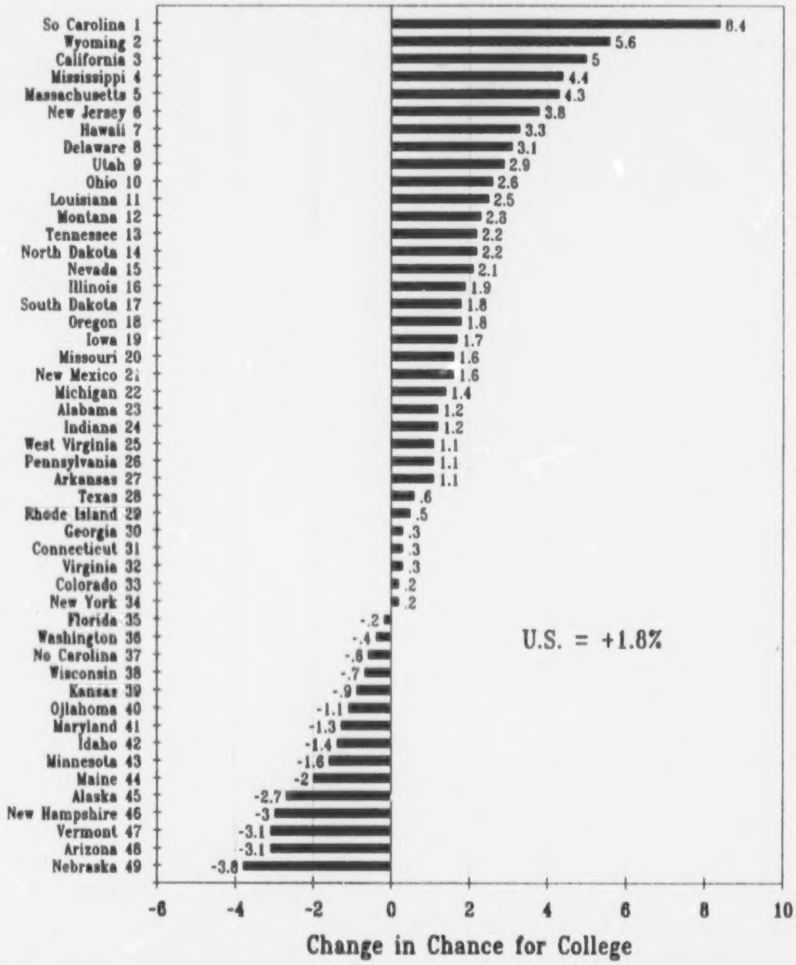
At the bottom of this ranking two states stand out: **Nevada and Alaska.** Both have respectable high school graduation rates but unusually low college continuation rates for their high school graduates.

Summary

We set out in this analysis to describe differences between states in chances that their 19 year olds would be enrolled in college. We also set out to describe the components of the calculated chances, and how both the chances and components had changed between 1986 and 1994.

The results describe these differences. The range across the states in the chance for reaching college by age 19 in 1994 was from 25 to 60 percent. States that ranked at the top in this analysis had both high high school graduation rates and high college continuation rates for their high school graduates. States with only one or the other did not make it out of the middle of these state rankings.

Change in Chance for College by Age 19
by State Between 1992 and 1994



Chance for College by State, State Summaries 1986, 1988, 1992 and 1994

	Public High School Graduation Rate				College Continuation Rate				Chance for College by Age 19			
State	1986	1988	1992	1994	1986	1988	1992	1994	1986	1988	1992	1994
Alabama	66.2%	74.1%	66.1%	60.1%	37.8%	47.7%	56.5%	64.1%	25.0%	35.3%	37.3%	38.5%
Alaska	79.3%	69.8%	74.1%	70.8%	19.9%	26.7%	39.4%	37.4%	15.8%	18.6%	29.2%	26.5%
Arizona	68.4%	66.6%	72.7%	63.8%	42.9%	55.6%	45.8%	47.3%	29.3%	37.0%	33.3%	30.2%
Arkansas	78.2%	78.7%	78.3%	76.4%	25.2%	41.4%	45.6%	48.2%	19.7%	32.6%	35.7%	36.8%
California	69.0%	68.5%	68.6%	66.3%	58.7%	58.3%	51.4%	60.8%	40.5%	39.9%	35.3%	40.3%
Colorado	76.2%	76.5%	75.1%	74.9%	11.0%	44.3%	51.2%	51.7%	8.4%	33.9%	38.5%	38.7%
Connecticut	87.1%	82.2%	80.4%	78.9%	45.8%	49.2%	57.1%	58.6%	39.9%	40.4%	45.9%	46.2%
Delaware	70.7%	69.8%	69.6%	66.5%	47.2%	43.2%	57.7%	65.1%	33.4%	30.2%	40.2%	43.3%
Dist of Col	60.7%	60.2%	62.8%	64.7%	33.4%	31.8%	31.3%	71.3%	20.3%	19.1%	19.7%	46.1%
Florida	66.8%	63.0%	65.0%	59.3%	44.6%	42.7%	45.3%	49.2%	29.8%	26.9%	29.4%	29.2%
Georgia	64.9%	63.4%	63.7%	59.4%	42.6%	47.7%	55.0%	59.4%	27.6%	30.2%	35.0%	35.3%
Hawaii	83.2%	81.7%	78.1%	76.1%	28.0%	45.8%	56.0%	61.7%	23.3%	37.4%	43.7%	47.0%
Idaho	79.9%	76.8%	81.1%	79.7%	43.3%	32.3%	49.0%	48.0%	34.6%	24.8%	39.7%	38.3%
Illinois	77.9%	78.2%	78.6%	77.2%	42.0%	53.1%	60.1%	63.6%	32.7%	41.5%	47.2%	49.1%
Indiana	76.2%	78.1%	76.0%	71.3%	37.5%	44.8%	50.0%	55.0%	28.6%	35.0%	38.0%	39.2%
Iowa	87.3%	86.9%	87.6%	87.0%	49.6%	57.5%	61.8%	64.1%	43.3%	50.0%	54.1%	55.8%
Kansas	84.6%	82.7%	80.5%	79.0%	47.0%	52.8%	57.3%	57.2%	39.8%	43.7%	46.1%	45.2%
Kentucky	68.9%	69.1%	69.8%	75.5%	39.4%	52.8%	16.4%	49.4%	27.1%	36.5%	11.4%	37.3%
Louisiana	61.7%	61.6%	52.9%	58.5%	42.5%	41.3%	54.2%	53.4%	26.2%	25.4%	28.7%	31.2%
Maine	76.1%	77.7%	81.1%	74.0%	23.5%	22.2%	48.5%	50.4%	17.9%	17.2%	39.3%	37.3%
Maryland	78.0%	76.1%	76.1%	74.7%	40.9%	46.4%	55.9%	55.2%	31.9%	35.3%	42.5%	41.2%
Massachusetts	74.7%	69.9%	79.1%	78.0%	50.4%	51.3%	59.0%	65.4%	37.6%	35.9%	46.7%	51.0%
Michigan	74.3%	72.9%	70.9%	70.0%	43.2%	48.8%	57.4%	60.1%	32.1%	35.6%	40.7%	42.1%
Minnesota	88.7%	89.5%	89.2%	87.9%	42.4%	49.6%	53.6%	52.6%	37.6%	44.4%	47.8%	46.2%
Mississippi	63.6%	67.5%	62.1%	62.4%	40.8%	48.2%	61.9%	68.6%	25.9%	32.5%	38.4%	42.8%
Missouri	76.6%	75.5%	73.2%	73.2%	42.2%	43.9%	48.6%	50.8%	32.3%	33.1%	35.6%	37.2%
Montana	86.3%	84.7%	85.5%	84.4%	27.9%	33.1%	50.8%	54.2%	24.1%	28.0%	43.4%	45.7%
Nebraska	87.7%	85.9%	87.2%	85.1%	53.6%	58.7%	63.3%	60.4%	47.0%	50.4%	55.2%	51.4%
Nevada	79.5%	73.0%	70.7%	67.4%	25.1%	42.3%	32.8%	37.6%	20.0%	30.9%	23.2%	25.3%
New Hampshire	74.5%	77.2%	78.1%	73.6%	40.0%	39.6%	56.2%	55.6%	29.8%	30.6%	43.9%	40.9%
New Jersey	79.4%	80.4%	84.1%	85.3%	40.1%	41.6%	60.8%	64.4%	31.8%	33.4%	51.1%	54.9%
New Mexico	73.0%	73.4%	67.8%	66.6%	37.3%	41.7%	50.1%	53.5%	27.2%	30.6%	34.0%	35.6%
New York	67.6%	66.3%	66.6%	64.5%	49.6%	45.2%	66.9%	69.5%	33.5%	30.0%	44.6%	44.8%
North Carolina	71.0%	68.0%	68.5%	66.0%	51.2%	53.1%	50.0%	51.0%	36.4%	36.1%	34.3%	33.7%
North Dakota	88.6%	88.3%	87.5%	87.7%	54.8%	56.3%	65.8%	68.2%	48.6%	49.7%	57.6%	59.8%
Ohio	79.3%	76.4%	72.4%	75.0%	34.0%	41.4%	49.7%	51.4%	27.0%	31.6%	36.0%	38.6%
Oklahoma	75.9%	74.0%	76.3%	76.1%	43.4%	32.4%	50.6%	49.3%	32.9%	24.0%	38.6%	37.5%
Oregon	71.7%	71.7%	73.5%	72.7%	45.0%	52.6%	54.3%	57.4%	32.3%	37.7%	39.9%	41.7%
Pennsylvania	81.0%	81.1%	81.5%	78.9%	38.9%	43.1%	53.8%	56.9%	31.5%	35.0%	43.8%	44.9%
Rhode Island	73.1%	70.5%	76.8%	73.4%	40.3%	44.1%	61.8%	65.4%	29.5%	31.1%	47.5%	48.0%
South Carolina	65.3%	65.2%	58.1%	57.5%	40.6%	47.1%	43.3%	58.4%	26.5%	30.7%	25.2%	33.6%
South Dakota	84.7%	86.7%	85.3%	91.4%	46.8%	41.2%	51.3%	49.9%	39.6%	35.7%	43.8%	45.6%
Tennessee	66.3%	68.6%	68.7%	63.0%	40.1%	46.2%	45.9%	53.5%	26.6%	31.7%	31.5%	33.7%
Texas	66.0%	64.9%	56.0%	59.6%	37.7%	50.5%	52.5%	50.4%	24.9%	32.8%	29.4%	30.0%
Utah	81.6%	81.3%	81.1%	80.2%	20.2%	27.0%	51.7%	55.8%	16.5%	22.0%	41.9%	44.8%
Vermont	80.9%	81.2%	82.4%	84.6%	40.3%	51.5%	55.7%	50.6%	32.6%	41.8%	45.9%	42.8%
Virginia	75.7%	74.6%	74.0%	72.4%	40.7%	48.0%	51.7%	53.3%	30.8%	35.8%	38.3%	38.6%
Washington	74.8%	78.0%	76.1%	76.7%	46.6%	48.6%	58.4%	57.4%	34.9%	37.9%	44.4%	44.0%
West Virginia	75.6%	76.8%	77.0%	78.0%	38.1%	41.5%	48.7%	49.5%	28.8%	31.9%	37.5%	38.6%
Wisconsin	84.6%	83.3%	82.2%	81.9%	47.2%	52.4%	60.5%	59.8%	39.9%	43.6%	49.7%	49.0%
Wyoming	77.2%	77.5%	83.8%	84.3%	46.6%	46.9%	46.2%	52.6%	36.0%	36.3%	38.7%	44.3%
TOTAL	73.3%	72.7%	71.2%	70.0%	43.0%	47.7%	53.6%	57.2%	31.5%	34.7%	38.2%	40.0%

Biting the hand . . . *. . . that feeds*

Federal Income Taxes Paid by College Educated Taxpayers 1970 to 1994

In 1994 households headed by persons with at least some college education:

- *Comprised 49 percent of all households,*
- *Earned 65 percent of all income, and*
- *Paid 71 percent of all federal individual income taxes.*

Despite the dependence of the federal government on the taxes paid by college educated workers in the labor force, the federal government spends just 0.7 percent of all of its expenditures on postsecondary educational opportunity.

Moreover, since 1980, the dependence of the federal government on the income taxes paid by college educated taxpayers has grown:

- *From 52 percent in 1980 to 71 percent by 1994.*

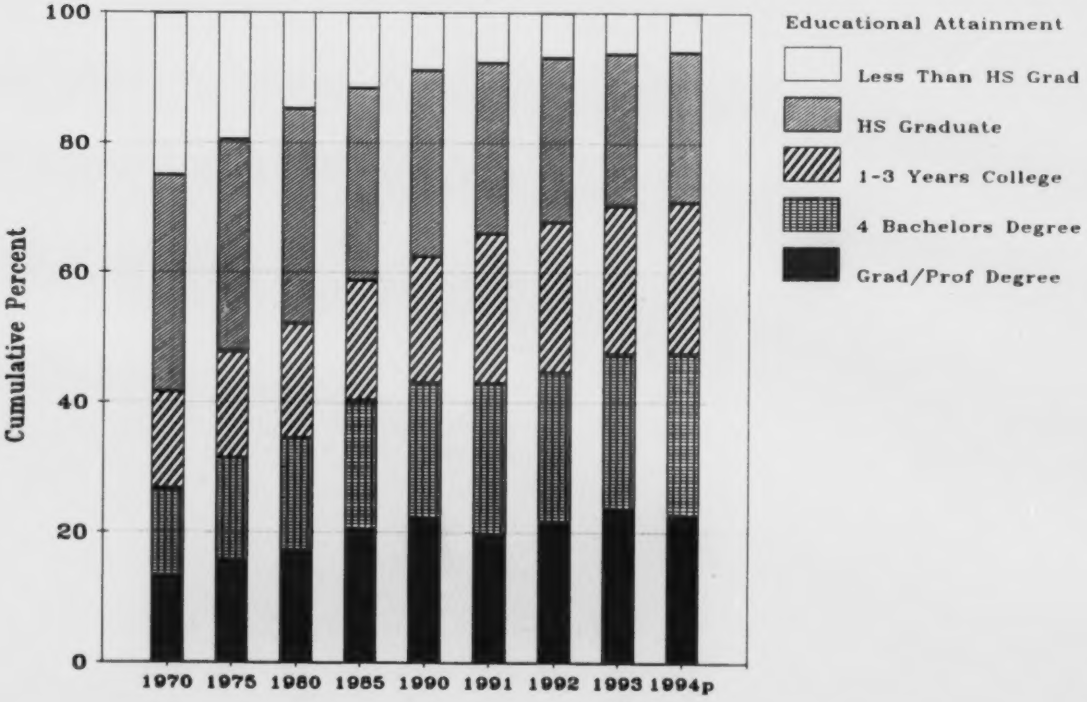
During this same period, the share of federal expenditures devoted to postsecondary education opportunity for students has shrunk:

- *From 0.95 percent in 1980 to 0.7 percent in 1993.*

During the last 15 years, as the federal government has grown increasingly dependent on the federal income tax revenue paid by college educated taxpayers, it has reduced its already paltry investments in educational opportunity that would expand the base from which these revenues are derived.

As a direct result, those who do pay federal income taxes pay more in federal income taxes than they would have if the tax base on which federal income taxes are assessed had been broadened.

Distribution of Federal Income Taxes Paid
By Educational Attainment of Head of Household
1970 to 1994



The analysis presented here is an update and extension of an analysis first presented in OPPORTUNITY in October 1994. The original analysis was suggested by Dr. William Hiss, Vice President for Administrative Services at Bates College. Bill also serves as a member of the federal Advisory Committee on Student Financial Assistance.

This analysis is prompted by a widely shared concern about declining social investment in opportunity for postsecondary education. Since 1979, the respective shares of the costs of financing postsecondary education have shifted sharply from taxpayers to students. According to the most recent published data from the National Income and Product Accounts, by 1993 federal taxpayers were paying $4.5 billion less per year for student financial aid than was their share in 1979, state taxpayers were paying $9.8 billion less in public institution appropriations, and students were paying $14.2 billion more in tuition and fees.

The benefits of postsecondary education that accrue to individuals are very large. Over a 40 year working lifetime, the average male with a bachelor's degree from college will earn about $700,000 more than will the average male with a high school diploma. For females this difference is about $400,000. For families headed by college graduates compared to families headed by high school graduates, the lifetime earnings differential is now about $1.3 million.

These earning differentials between the college and high school educated have been growing for more than two decades, and the rate of growth appears to have accelerated since the late 1980s. This growing private benefit of postsecondary education appears to underlie and justify the cost shift from taxpayers to students imposed by federal and state policy makers since 1979.

Far less quantifiable are the benefits that accrue to society as a whole from social resource investments in opportunity for postsecondary education. When economists calculate social rates of return from social resource expenditures on higher education, the only purely social benefit measured is the increased tax revenue collected on the higher incomes earned by college educated workers compared to the taxes paid on the incomes of workers without college educations. The actual social rate of return calculation combines private and social costs. Calculated in consistent ways, the social rate of return to undergraduate higher education has been estimated in the range of 11.6 to 12.1 percent over the last five decades.

This calculation ignores a broad range of widely appreciated but difficult-to-quantify social benefits from higher education expenditures by governments. These include community leadership and improved quality of decision-making, citizenship and democracy, and socialized behaviors. And as we have noted frequently in these pages: reduced crime and criminal justice system costs, reduced welfare, Medicaid and other socially dependent behaviors and social programs costs. Moreover, there are intergenerational social costs that social scientists at the University of Chicago and the Rand Corporation have been reporting on recently.

Economists have guessed that excluding these types of social benefits causes the calculated social rate of return to understate by perhaps half the true social rate of return on government expenditures on postsecondary education.

Here we look specifically at the federal income taxes paid by college educated taxpayers. We do so over time, between 1970 and 1994. And we do so by level of educational attainment.

Analysis and Data

The components of tax analysis used here are *base* and *rate*. Government tax revenues are the product of the tax base--in this case individual income--times the rate at which this base is taxed.

The tax base for the federal individual income tax is all income received in the form of money, property and services that is not expressly exempt from tax. A citizen or resident is required to file a federal income tax return if gross income exceeded certain minimums. For a single person under age 65, the minimum was $5900 in 1992. For a married couple filing jointly it was $10,600. Other minimums applied to different circumstances.

Because federal income tax forms do not collect information on the educational attainment of the tax filer, we have sought a data base that relates income to educational attainment. For this purpose our data base is the Census Bureau's Current Population Survey.

U.S. Bureau of the Census, Current Population Reports, Series P-60-189. *Income, Poverty, and Valuation of Noncash Benefits: 1994.* U.S. Government Printing Office, Washington, DC, 1996.

Prior to 1993, this report appeared under the title *Money Income of Households, Families, and Persons in the United States: Year*, still in the P60 series of Current Population Reports.

The Current Population Survey defines

income as the sum money income received from 18 sources. The categories are:

- Earnings from longest job or self employment
- Earnings from jobs other than longest job
- Unemployment compensation
- Workers compensation
- Social Security
- Supplemental Security Income
- Public assistance
- Veterans payments
- Survivor benefits
- Disability benefits
- Pension or retirement income
- Interest
- Dividends
- Rents, royalties, estates, trusts
- Educational assistance
- Alimony
- Child support
- Financial assistance from outside of the household, and other periodic income

Adjusted gross income on federal income tax returns is not quite the same thing as income as defined by the Census Bureau in the Current Population Survey. However, the totals are quite close as shown below:

Comparison of Household Income with Adjusted Gross Income (billions)

Year	Total Household Income	Adjusted Gross Income
1970	$643.8	$610.3
1975	$1,004.0	$947.8
1980	$1,734.9	$1,613.7
1985	$2,571.1	$2,306.0
1990	$3,422.6	$3,405.4
1991	$3,524.9	$3,464.5
1992	$3,652.7	$3,629.1
1993	$3,690.6	$3,723.3
1994	$4,143.3	DNA

The tax rates reported in this analysis were calculated from the Internal Revenue Service's analysis of each tax year's individual income tax returns.

Individual Income Tax Returns 1993. Publication 1304. March 1996. Washington, DC: Internal Revenue Service. See Table B.

Effective federal income tax rates were calculated by dividing total income tax by adjusted gross income at different income intervals. Then the effective federal income tax rate was interpolated at the average household income for each level of educational attainment.

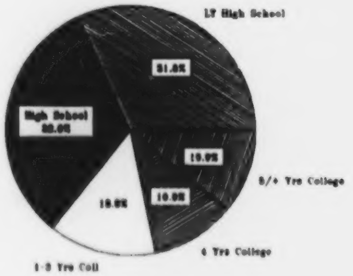
One final note on educational attainment. From 1970 through 1990 the Census Bureau measured educational attainment as years of school completed. Beginning in 1991 the definition was changed to highest degree completed. We have merged these two definitions in our report, and feel comfortable in doing so.

Tax Base

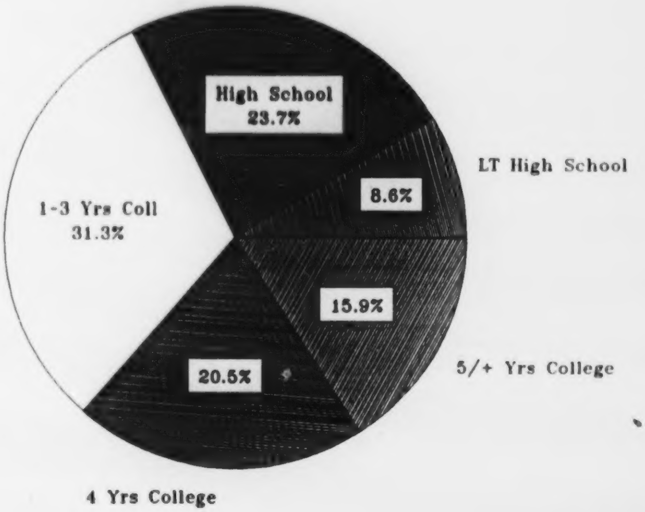
Between 1970 and 1994 the base on which federal individual income taxes

Household Income by Educational Attainment

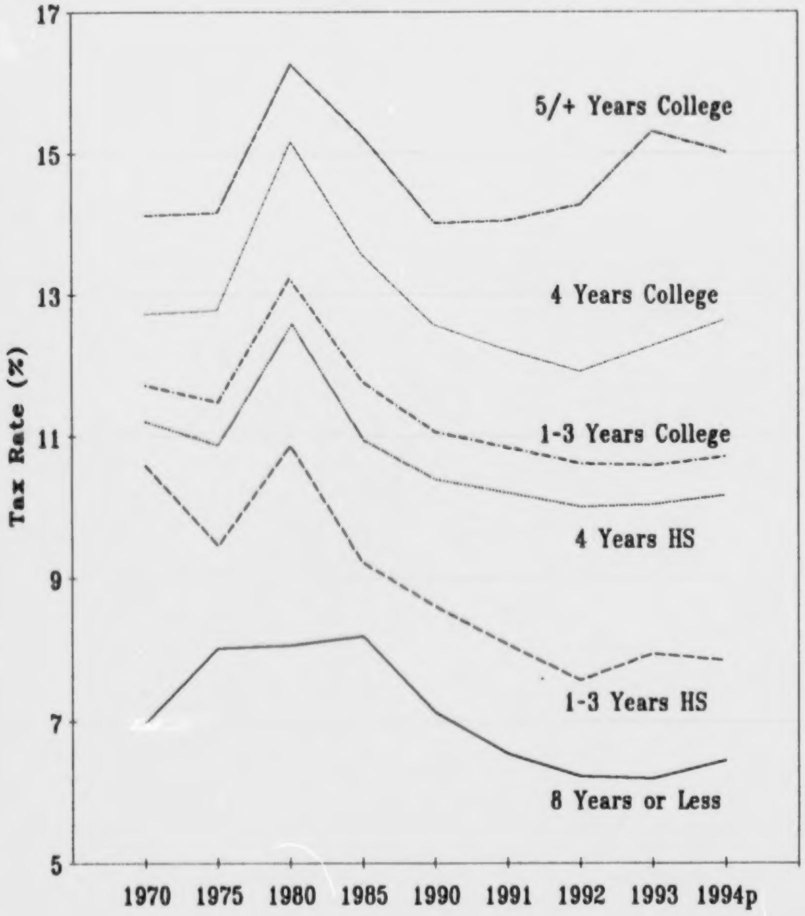
(1994 Constant Dollars)



1970: $2457.5 billion



1994: $4534.8 billion


Effective Federal Income Tax Rates
by Educational Attainment of Head of Household
1970 to 1994

are based increased from $644 to $3525 billion. Removing inflation, total income grew by 68 percent.

All of the real growth in household income between 1970 and 1994 occurred in households headed by persons with at least some college education. Total incomes of households headed by persons with a high school education or less decreased by 7 percent, while total incomes of households headed by persons with at least some college increased by 250 percent. These changes are partly due to the shrinking numbers of households headed by persons with a high school education or less and growing proportion of households headed by persons with at least some college. These changes are also due to changing household income which is shrinking for those without college educations and keeping up with inflation for those with college educations.

Tax Rate

Between 1970 and 1994, the effective federal income tax rate--calculated as federal income taxes paid divided by total household income--has fluctuated between 10.93 and 12.95 percent:

1970	10.93%
1975	11.09%
1980	12.95%
1985	11.88%
1990	11.27%
1991	11.05%
1992	10.93%
1993	11.29%
1994p	11.42%

The effective tax rate for 1994 happens to be exactly the average for the years shown.

By levels of educational attainment, effective federal income tax rates have declined for all households below the level of the bachelor's degree. This is primarily because those incomes have declined, and under the progressive tax rate structure of federal income taxes the taxes they have paid have declined as a portion of income as their real incomes have declined. At the level of the bachelor's degree, the effective rate in 1994 was almost exactly where it had been in 1970. But for those with five or more years of college, effective tax rates have increased--because in real terms their incomes have also increased and the progressive tax rate schedule captures a part of this real gain.

Tax Revenue

In 1994 93,546,000 households earned $4,143,339,000,000 in income and paid $473,353,000,000 in federal income taxes on that income.

Of the total paid in federal individual income taxes, 6 percent was paid by households where the head had less than a high school education, 23 percent was paid by households where the head had a high school diploma and the rest--71 percent--was paid by households where the head had at least some college education. In 1994 23 percent was paid by households where the head had some college but no degree or had an associate degree, 25

Federal Income Taxes Paid
by Educational Attainment of Head of Household
1994

Educational Attainment of Head	Households (000)	Average Income	Total Income (000,000)	Preliminary Federal Income Tax Rate	Federal Income Taxes Paid (000,000)
Less Than Ninth Grade	8,242 8.8%	$19,628	$161,774 3.9%	6.44%	$10,418 2.2%
9th to 12th Grade (No Diploma)	9,644 10.3%	$23,836	$229,874 5.5%	7.85%	$18,045 3.8%
High School Graduate	29,647 31.7%	$36,308	$1,076,423 26.0%	10.17%	$109,472 23.1%
Some College, No Degree	16,786 17.9%	$42,773	$717,988 17.3%	10.59%	$76,035 16.1%
Associate Degree	6,403 6.8%	$48,046	$307,639 7.4%	10.97%	$33,748 7.1%
Bachelor's Degree	14,380 15.4%	$64,536	$928,028 22.4%	12.64%	$117,303 24.8%
Master's Degree	5,506 5.9%	$74,482	$410,098 9.9%	13.87%	$56,881 12.0%
Doctorate Degree	1,227 1.3%	$100,593	$123,428 3.0%	16.10%	$19,872 4.2%
Professional Degree	1,710 1.8%	$109,924	$187,970 4.5%	16.80%	$31,579 6.7%
Total	93,546 100.0%	$44,292	$4,143,339 100.0%	11.42%	$473,353 100.0%
Any College	49.1%		64.5%		70.9%
Bachelor's Degree or More	24.4%		39.8%		47.7%

Sources:

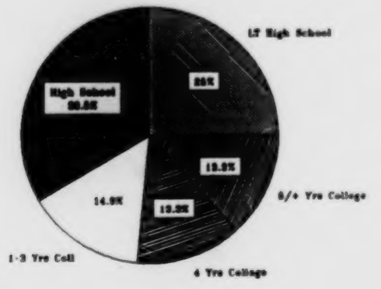
Household data from *Income, Poverty, and Valuation of Noncash Benefits: 1994*. Current Population Reports, Consumer Income, Series P-60, No. 189, Table 2. Preliminary Federal income tax rate derived from *Individual Income Tax Returns 1993*. Internal Revenue Service, Publication 1304, Table B.

percent was paid from households where the head had a bachelor's degree, and the remaining 23 percent was paid by households where the head had a master's, doctorate or professional degree.

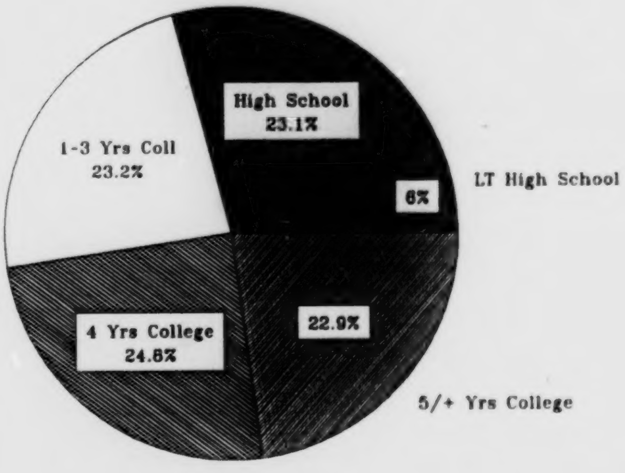
Since 1970 the proportion of federal individual income taxes paid by households headed by persons with at least some college education has grown rapidly. In 1970 these households paid about 42 percent of all taxes. By 1980 this had risen to 52 percent, then to 63 percent by 1990, and most recently to 72 percent by 1994. At the same time, the proportion of federal income taxes paid by households headed by persons with a high school education or less has shrunk, from 58 percent in 1970 to 29 percent by 1994.

These shifts have almost nothing to do with changes in federal income tax law or rates during this period of time. Mainly these shifts are due to a substantial shift in educational attainment of heads of households, and secondarily to shifts in household income toward those households headed by persons with at least some college education.

Federal Income Taxes Paid by Education
(1994 Constant Dollars)



1970: $268.7 billion



1994: $473.4 billion

What If Scenarios

The analysis of data to this point has described reality in the period between 1980 and 1994. These data can be altered to examine alternatives to this course of history. Specifically, we will explore two alternative scenarios:

- What if educational attainment had not expanded beyond, say, 1980 levels? What would effective tax rates have to be to generate the same level of federal revenue? Or what revenue would be available if tax rates had held constant?
- What if educational attainment had been expanded more rapidly than actually occurred after 1980? What would happen to federal tax rates if the present tax revenues were held constant? What would happen to federal revenues from the income tax if rates had held constant while attainment was increased?

Scenario 1: The importance of the expansion of the proportion of the population with postsecondary education between 1980 and 1994 may be estimated as follows.

- If in 1994 households were distributed across levels of educational attainment at the 1980 distribution, then total household income would have been $3.7 trillion instead of the $4.1 trillion actually achieved. The expansion of educational attainment among household heads between 1980 and 1994 added about 11 percent to total household income in 1994.
- If effective federal income tax rates by income levels in 1994 were applied to this reduced income base, then instead of the $473 billion actually paid by taxpayers in 1994 the federal government would have collected $410 billion. Because of the progressive tax rate structure of federal income taxes, the increased income of more

Distribution of Households, Income and Federal Income Taxes Paid by Educational Attainment of Head of Household
1970-1994

Educational Attainment of Head	1970	1975	1980	1985	1990	1991	1992	1993	1994p
Households									
Number (thousands)	64,374	72,867	82,368	88,458	89,429	90,810	91,369	91,842	93,546
Less Than 8 Years	14.0%	11.5%	9.4%	7.5%	11.3%	10.3%	9.9%	9.3%	8.8%
8 Years	12.8	9.7	7.9	6.5					
1 to 3 Years HS	16.4	15.3	14.0	12.5	11.3	11.4	10.9	10.6	10.3
4 Years High School	31.3	33.1	34.6	35.4	35.8	33.2	32.9	32.0	31.7
1-3 Years College	11.8	14.0	15.6	17.3	18.4	22.1	22.8	24.3	24.7
4 Years College	13.6	9.2	10.2	11.8	12.8	14.5	14.6	15.0	15.4
5/+ Years College		7.2	8.2	9.1	10.4	8.5	8.8	8.7	9.0
Any College	25.4%	30.4%	34.0%	38.2%	41.6%	45.1%	46.2%	48.0%	49.1
4 Years or More	13.6	16.4	18.4	20.9	23.2	23.0	23.4	23.7	24.4
Total Income									
Amount (billions)	$644	$1004	$1735	$2,571	$3,423	$3,525	$3,653	$3,691	$4,143
Less Than 8 Years	8.1%	6.3%	4.9%	3.6%	5.5%	4.8%	4.6%	4.2%	3.9%
8 Years	9.3	6.6	5.1	3.9					
1 to 3 Years HS	14.4	12.0	10.2	8.4	6.9	6.7	6.1	6.0	5.5
4 Years High School	32.6	33.4	34.1	32.2	31.2	28.5	27.8	26.2	26.0
1-3 Years College	13.9	15.8	17.2	18.7	19.8	23.4	23.8	24.3	24.7
4 Years College	21.8	13.4	14.8	17.2	18.6	20.9	21.0	21.8	22.4
5/+ Years College		12.4	13.7	16.1	18.0	15.7	16.7	17.5	17.4
Any College	35.7%	41.6%	45.7%	52.0%	56.4%	60.0%	61.5%	63.6%	64.5%
4 Years or More	21.8	25.8	28.5	33.3	36.6	36.6	37.7	39.3	39.8%
Federal Income Taxes									
Amount (billions)	$70	$111	$225	$306	$386	$390	$399	$441	$473
Less Than 8 Years	4.1%	4.1%	2.3%	2.3%	3.5%	2.9%	2.6%	2.3%	2.2%
8 Years	6.9	5.2	3.9	2.8					
1 to 3 Years HS	13.9	10.2	8.6	6.5	5.3	4.9	4.3	4.2	3.8
4 Years High School	33.4	32.7	33.2	29.6	28.7	26.3	25.3	23.3	23.1
1-3 Years College	14.9	16.4	17.6	18.5	19.4	23.0	23.1	22.8	23.2
4 Years College	26.7	15.5	17.2	19.6	20.7	23.1	22.9	23.8	24.8
5/+ Years College		15.9	17.3	20.7	22.4	19.9	21.8	23.6	22.9
Any College	41.6%	47.8%	52.1%	58.8%	62.5%	66.0%	67.8%	70.2%	70.9%
4 Years or More	26.7	31.4	34.5	40.3	43.1	43.0	44.7	47.4	47.7

Notes:
1. Definition of educational attainment changed in 1991 from years of school completed to highest degree earned.
2. Households limited to those headed by persons over 25 years beginning in 1990.

college educated taxpayers moved them into higher tax brackets. This increase added about 16 percent to federal individual income tax revenues in 1994 beyond what would have been produced without the increased number of college educated taxpayers between 1980 and 1994.

- Alternatively, to collect the $473 billion in federal income taxes in 1994 without the increase in educational attainment of taxpayers, the effective federal income tax rate would have had to be raised from the actual 11.4 percent to 12.7 percent of total household income, or nearly to the record high rates that existed in 1980 that prompted the defeat of President Carter and election of President Reagan.

Scenario #2: Postsecondary education opportunity could have been expanded between 1980 and 1994 beyond the labor market-driven expansion that did occur. During this period social investment in educational opportunity at the federal level and in nearly all states was sharply curtailed and substantial costs of higher education were shifted to students. This cost shift adversely affected access, choice and persistence enrollment decisions of students from low and middle income family backgrounds.

In this scenario, we estimate the effects on household income, federal income tax revenues, and federal income tax rates of modest, incremental expansion of higher education opportunity between 1980 and 1994. If in 1994 just an additional 1 percent of American households were shifted from high school graduates to bachelor's degrees, then:

- 296,000 households would be subtracted from the high school graduate head total and added to the bachelor's degree head total.
- This would add a net gain of $8.4 billion to total household income.
- The net revenue gain to the federal government from the individual income tax would be about $800 million per year.

Quite likely such a shift would have other economic benefits as well. Among these might be reduction in social program costs and a slowing of the growing income inequality that has characterized and plagued the United States since 1968.

Summary

This analysis set out to examine the relationship between educational attainment and revenues to the federal government from the individual income tax. In 1994 households headed by persons with any college comprised 49 percent of all households, earned 65 percent of all household income and paid 71 percent of federal income taxes. Households headed by persons with a bachelor's degree or more from college comprised 24 percent of all households, earned 40 percent of all income and paid 48 percent of federal individual income taxes. Since 1970 the proportion of federal income tax revenue paid by college educated taxpayers has grown from 41 to 71 percent of the total. Despite this, the proportion of federal expenditures for higher educational opportunity has declined from 0.95 percent in 1980 to 0.70 percent in 1993.

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Postsecondary Education
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The Mortenson Research Seminar on Public Policy Analysis of Opportunity for Postsecondary Education

Number 50 **Iowa City, Iowa** **August 1996**

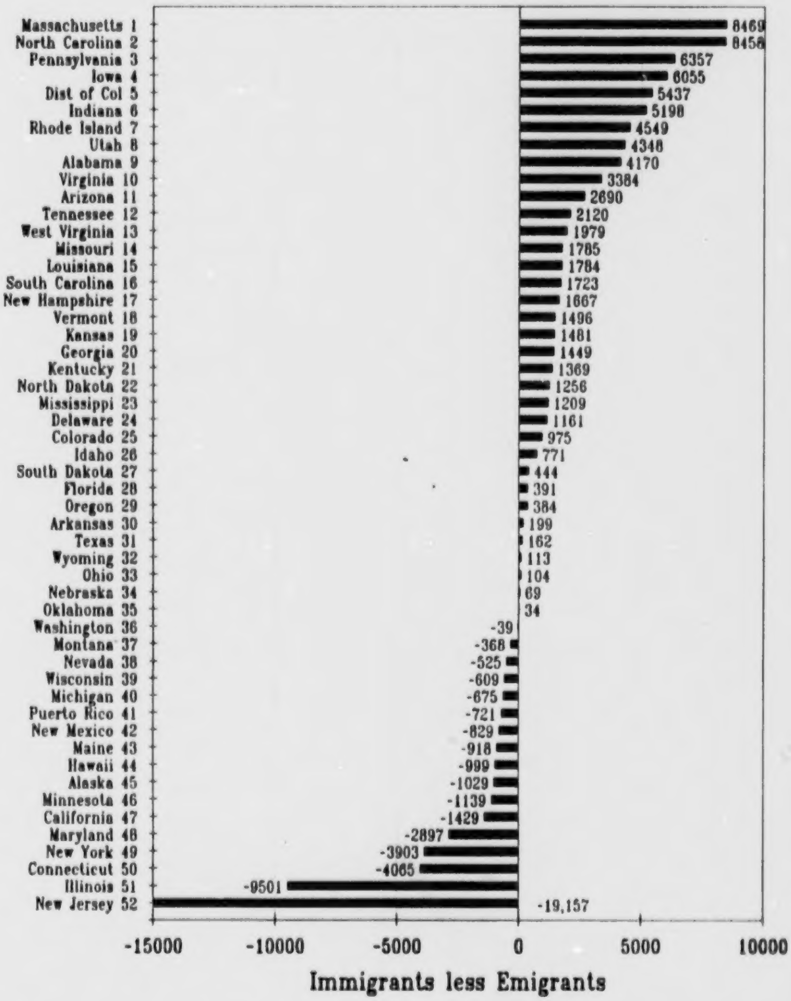
Trends and Patterns in Interstate Migration of College Freshmen

Going away to college is an important tradition in American families. It is a tradition that higher education encourages due to diversity objectives for campus enrollments. Living among students whose backgrounds differ fosters a stimulating and challenging social environment and adds to the learning experience of students.

Here we examine data on the interstate migration of college freshmen who were recent high school graduates. The cohort of 1,466,000 college freshmen studied here entered college in the fall of 1994 and had graduated from high school during the past 12 months. Of these freshmen, 265,000 left the state from which they had graduated from high school to enter college in another state.

Our analyses find that students are far more likely to leave some states to enroll in college than they are from other states. Likewise, some states draw immigrants at high rates. As a result, some states are large net importers of college students, while a few are large exporters of their residents to colleges and universities in other states. This balance of exchange in college student enrollments brings income to some states, and drains income from other states.

Net Migration of College Freshmen, 1994



Our analysis here updates a previous examination of these data reported in OPPORTUNITY in December 1994 based on residence and migration data for 1988 and 1992. Overall, the major patterns and trends reported from that analysis still are present in the 1994 data:

- Freshmen are still leaving New Jersey and Illinois by the thousands to enroll in colleges in other states.
- Freshmen are still flocking to Massachusetts, North Carolina,

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Pennsylvania and **Iowa** from other states to enroll in higher education institutions there.

As a region, New England still leads the country in attracting more college freshmen than it exports to other states.

But among 50 states, one can expect to find shifts in these basic trends and patterns. In fact that is the story told in these data:

- Emigration rates increased significantly from **Alaska, Vermont** and **New Mexico** between 1992 and 1994.
- Immigration rates increased the most in **Arizona, Maryland, Wyoming, Vermont, Connecticut** and **Rhode Island** between 1992 and 1994.

Here we examine the trends and patterns of interstate migration of college freshmen in 1994 who were recent high school graduates.

The Data

Residence and migration surveys have been conducted periodically by the federal government since 1938. More recently, residence and migration data on college freshmen enrollments have been collected in every even-numbered year since 1986 as a part of the Integrated Postsecondary Education Data System (IPEDS) enrollment surveys of the National Center for Education Statistics. Data from this survey were released for 1986, 1988, 1992 and 1994, but not 1990 due to incomplete data returns from two states in that year.

Our interest here is in the data on first-time college freshmen who have graduated from high school in the previous 12 months. NCES also publishes residence and migration data for all first-time freshmen, a broader group that includes freshmen who have not graduated from high school during the previous 12 months. We use the former, more focused definition because we believe that the meaning of state-resident is more closely tied to state education traditions, such as high school graduation. First-time freshmen who were recent high school graduates were about 69 percent of all first-time freshmen. Including older students in our analysis adds an unmeasured component of interstate migration prior to college enrollment that naturally occurs among young adults establishing households separate from their parents.

Barbett, S. (March 1996.) *Residence and Migration of First-Time Freshmen Enrolled in Higher Education Institutions: Fall 1994.* NCES 96-846. Washington DC: National Center for Education Statistics.

Going Far Away to College

In the fall of 1994 there were 1,467,796 first-time freshmen enrolled in higher education institutions who had graduated from high school during the previous 12 months. Of this total, 296,352 students were residents of other states. Thus, in 1994 20.2 percent of all first-time freshmen who were recent high school graduates enrolled in college in another state than their state of residence. Expressed another way, one freshman in five bypassed less expensive state-supported institutions in their home state to attend a more expensive institution (either private or public but usually at non-resident tuition rates) in another state.

The migration data for prior years were:

Year	Students	Migrants	Rate
1992	1,397,797	279,256	20.0%
1988	1,328,604	233,933	17.6%
1986	942,302	203,379	21.6%

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Mission Statement

This research letter is founded on two fundamental beliefs. First, sound public social policy requires accurate, current, independent, and focused information on the human condition. Second, education is essential to the development of human potential and resources for both private and public benefit. Therefore, the purpose of this research letter is to inform those who formulate, fund, and administer public policy and programs about the condition of and influences that affect postsecondary education opportunity for all Americans.

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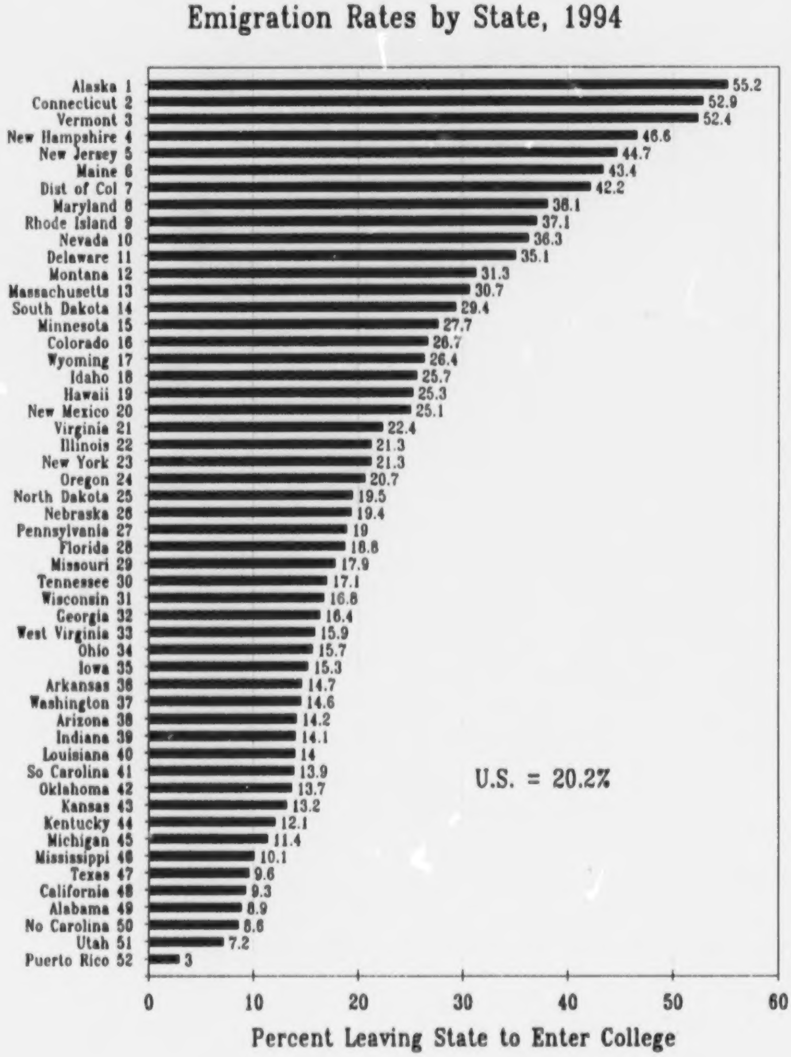
Net migration is the difference between students entering a state to enroll in college (immigrants) less those who leave a state to attend college (emigrants). The chart on the first page of this issue of OPPORTUNITY shows net migration numbers for each state in 1994. At the top of this chart, states like **Massachusetts** and **North Carolina** imported about 8500 more freshmen than they exported. Other states importing 4000 or more freshmen than they exported were **Pennsylvania, Iowa, District of Columbia, Indiana, Rhode Island, Utah** and **Alabama**.

At the other extreme are the states that export more of their high school graduates to enroll in colleges in other states than they import. **New Jersey** has lead this list forever with 19,157 more state freshmen leaving the state to enter college elsewhere than nonresidents coming to New Jersey to enroll in college. **Illinois, Connecticut, New York** and **Maryland** also stand out as quite large net exporters of their states' high school graduates to enter college in other states.

It is probably no accident that large states dominate the extremes of this ranking--the base of college freshmen is larger. Thus, the balance of this analysis examines migration *rates*, not numbers of freshmen, to make comparisons of emigration, immigration and net migration between states and within states between 1992 and 1994.

Emigration Rates by State

The chart on this page shows states ranked by the rate at which state resident first-time college freshmen left their state of residence to attend college in 1994. The rate is calculated by dividing the number of state residents enrolled in college in another state by the number of each state's freshmen enrolled in college anywhere in 1994.



The proportion of each state's college freshmen leaving their state of residence to enter college ranged from 3.0 percent in **Puerto Rico** to 55.2 percent of those from **Alaska**. Over half of the freshmen entering college left their state of residence for college in **Connecticut** and **Vermont**, in addition to Alaska. Over a third left their home state to enter college in **New Hampshire, New Jersey, Maine, District of Columbia, Maryland, Rhode Island, Nevada** and **Delaware**.

In addition to Puerto Rico, fewer than 10 percent of the freshmen entering college from **Utah, North Carolina, Alabama, California** and **Texas** left their home state to do so.

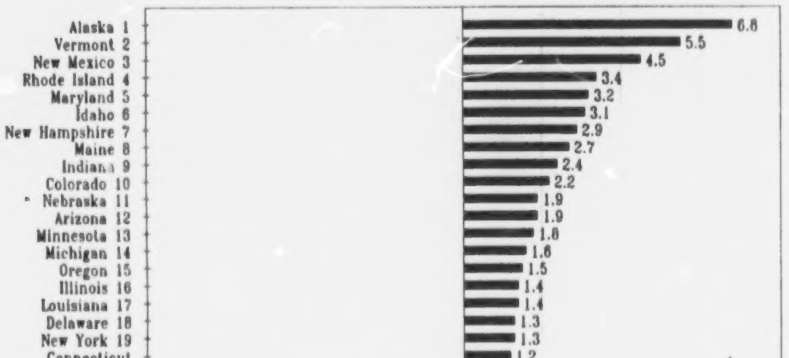
When freshmen leave their state of residence to enroll in college in another state, typically they do so to enroll in particular institutions. Of the 296,352 first-time freshmen who left their home state to enroll in another state, they enrolled in institutions by type and control as follows:

Private 4-year	164,472	55.5%
Public 4-year	107,867	36.4%
Public 2-year	16,954	5.7%
Private 2-year	7,059	2.4%

Between 1992 and 1994 emigration rates changed in nearly all of the states. Emigration rates increased the most in **Alaska** by 6.8 percent, from 48.4 to 55.2 percent. Other states with large increase in emigration rates were **Vermont** (+5.5 percent, from 46.9 to 52.4 percent), **New Mexico** (+4.5 percent, from 20.6 to 25.1 percent). Emigration rates increased between 1992 and 1994 in 36 states.

Emigration rates decreased the most in the **District of Columbia**, by 31.6 percent, from 73.8 to 42.2 percent. Other substantial decreases in emigration rates between 1992 and 1994 occurred in **Wyoming** (-6.0 percent, from 32.4 to 26.4 percent), **Nevada** (-4.6 percent, from 40.9 to 36.3 percent), **South Carolina** (-3.8 percent, from 17.7 to 13.9 percent) and **Georgia** (-3.2 percent, from 19.6 to 16.4 percent).

Change in Emigration Rates by State, 1992 to 1994



Immigration Rates by State

The immigration rate for 1994 is the percent of each state's first-time freshman enrollment that is resident of another state. Like the previous analysis, data are limited to freshmen who had graduated from high school during the previous 12 months. Here too about one freshman in five came from another state.

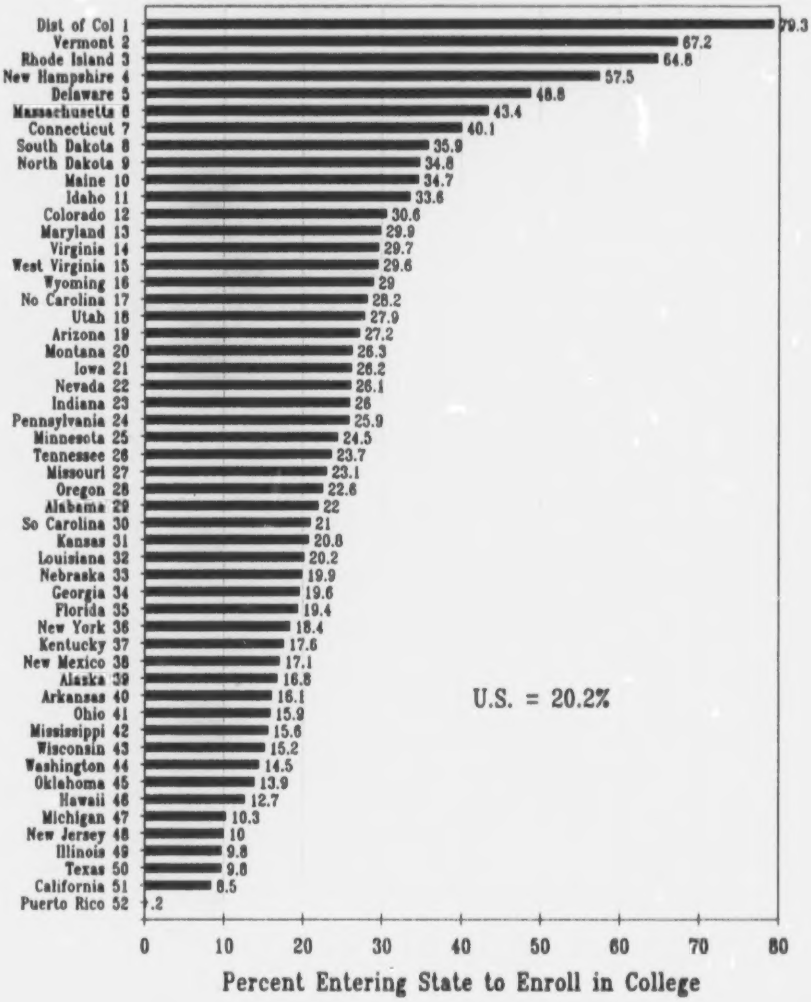
In 1994 immigration rates ranged from 0.2 percent in **Puerto Rico** to 79.3 percent in the **District of Columbia**--both special cases. Among the states, immigration rates ranged from 8.5 percent in **California** to 67.2 percent in **Vermont**.

Each of the five states with the lowest immigration rates are very large states--California, **Texas**, **Illinois**, **New Jersey** and **Michigan**. Each of these states are large themselves and have large, diverse and complete public and private higher education systems. However, their enrollments are the most homogeneous among all state systems of higher education, and do not stand out compared to other state higher education systems as attractive to students from other states.

At the other extreme, the states with the largest proportion of freshmen from other states are usually the smallest of states, and include **Vermont, Rhode Island, New Hampshire, Delaware, Connecticut** and **Massachusetts**. By virtue of their small size, they may offer a relatively narrow range of higher education opportunities. But these opportunities are apparently very attractive to students from beyond their borders.

Most of these states are in New England, which quite consciously considers, manages and cherishes its higher education institutions--particularly private--as valuable state resources. Despite small size, these states enroll large portions of their

Immigration Rates by State, 1994



freshmen from beyond their borders, attracting students past intervening and less expensive alternatives for the particular brand or quality of higher education opportunity that they offer.

The states with the largest *numbers* of freshmen immigrating to attend private 4 year colleges and universities in 1994 were:

Massachusetts	17,301
New York	16,432
Pennsylvania	15,292

No other state attracted more than 7500 freshmen from out-of-state to its private 4 year institutions.

The states with the largest *percentages* of freshmen immigrants enrolled in its private 4 year colleges and universities in 1994 were:

District of Columbia	91.7%
Massachusetts	86.3%
New York	83.5%
Connecticut	82.8%
Illinois	81.8%

The states with the largest *numbers* of freshmen immigrating to attend public 4 year colleges and universities in 1994 were:

California	5,959
Virginia	5,083
Colorado	4,175
Alabama	4,036

Between 1992 and 1994, immigration rates increased in 29 states, and decreased in 22 states, as shown in the chart on the following page. (Kentucky was dropped from this comparison because of data reporting problems in 1992.) Immigration rates increased by the largest margins in **Arizona, Maryland, Wyoming, Vermont, Connecticut and Rhode Island.**

Immigration rates dropped by the largest margins in the **District of Columbia, Idaho, Arkansas** and **Delaware** between 1992 and 1994.

To get a broader perspective on changing immigration rates among the states, we have also compared 1994 rates to those that existed in 1988. The states with the largest gains in immigration rates between 1988 and 1994 were:

Rhode Island	21.8%
Vermont	16.4%
Utah	14.0%
Montana	13.4%
Nevada	10.8%
Maryland	8.9%
Arizona	9.1%

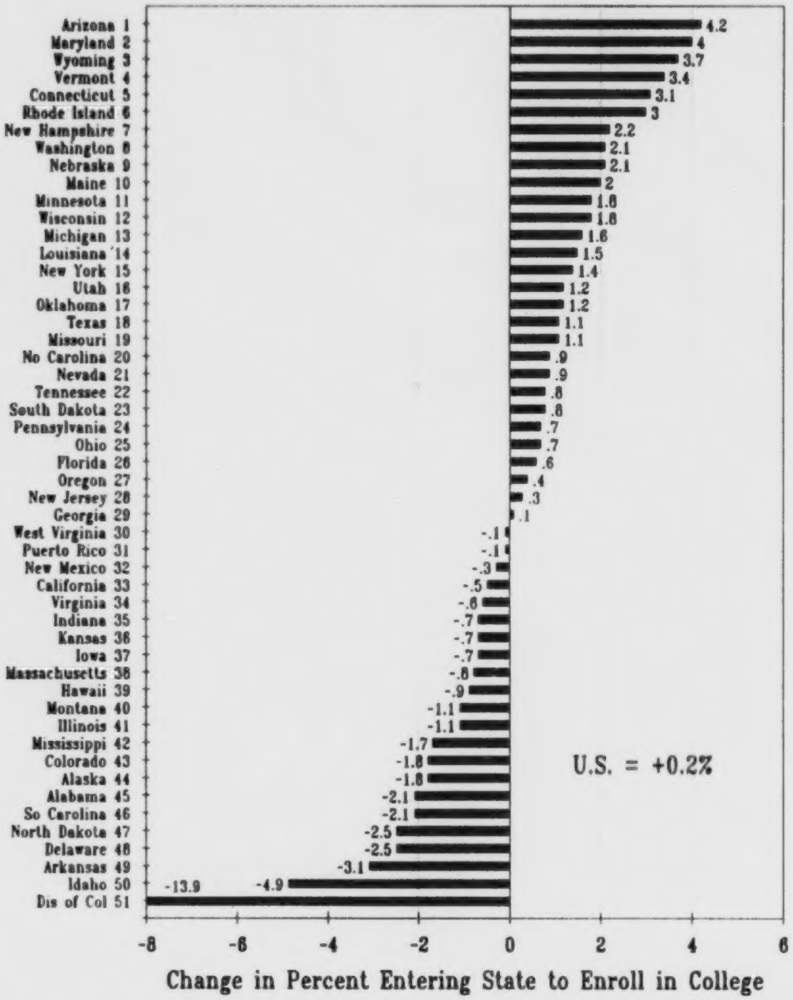
The states with the largest losses in immigration rates between 1988 and 1994 were:

Delaware	-12.3%
Idaho	-12.2%
District of Columbia	-11.7%
Maine	-9.4%

Net Migration Rates by State

While the ebb and flow of students across state boundaries to enter college balances out at the national level, it does not do so at the state level. Some states attract more students from other states than they export to those

Change in Immigration Rates by State, 1992 to 1994



states. Other states attract fewer students from other states than the send away to those states. This is called net migration.

The chart on page 1 of this issue of OPPORTUNITY shows these as numbers for first-time freshmen who graduated from high school during the previous 12 months. Here we calculate net migration as a rate, dividing the net of immigration and emigration by the number first-time freshmen enrolled in each state. This eliminates the size factor influence on ranking states by net migration, and more clearly focuses on the relative attractiveness of each state's system of higher education for freshmen students.

Net migration rates ranged from +64.1 percent for the **District of Columbia** to -85.9 percent for Alaska--both truly extreme cases.

Among more typical states, net migration rates ranged from +44.0 percent for **Rhode Island** to -62.8 percent for New Jersey. Thirty-five states had positive net migration rates, and 17 had negative rates (counting the District of Columbia and Puerto Rico as states.)

In addition to the District of Columbia and Rhode Island, other states with large positive net migration rates were **Vermont, Iowa, Utah, North Carolina, Delaware** and **New Hampshire**. Each of these states appear to offer relatively attractive higher educational opportunities in that they attract students from other states ar far greater rates than they export their own residents to other states.

In addition to Alaska and New Jersey, other states with large negative net migration rates in 1994 were **Connecticut, Hawaii, Nevada, Maine, Illinois, Maryland** and **New Mexico**. Those states appear to offer relatively unattractive higher educational opportunities to freshmen because they export relatively far more of their own students to other states than they are able to attract to their own public and private colleges and universities.

Interstate Migration and Public Policy

Public policy regarding interstate student migration to attend college may be clearly described as mixed to contradictory.

There are numerous and important programs designed to foster interstate undergraduate student migration. Examples include:

- The federal Pell Grant and all Title IV student financial aid may be used anywhere in the U.S.
- Many states participate in regional student exchange programs that permit students to cross state boundaries without incurring full nonresident tuition charges. Such programs are administered by the New England Board of Higher Education, Southern Regional Education Board, and Western Interstate Commission on Higher

Education.

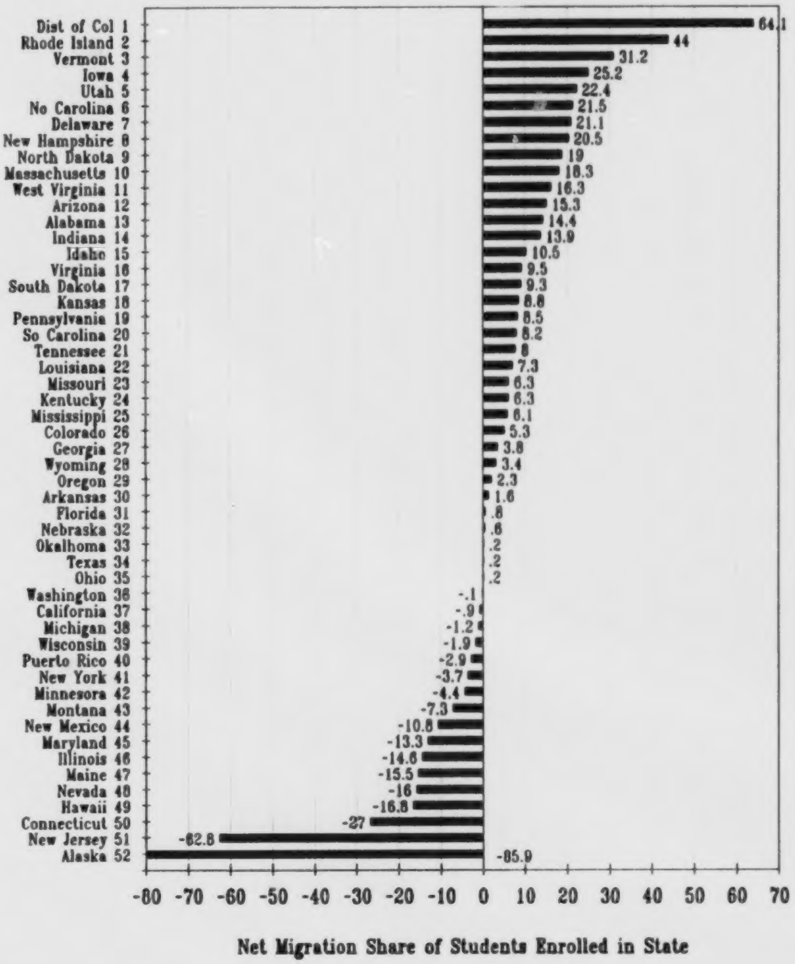
- Several states negotiate bilateral student exchange agreements with adjacent states and even with Canadian institutions and provinces.
- Several states allow state grant program recipients to use their grants at institutions outside their home state. Examples include **Massachusetts General Scholarships, New Hampshire Incentive Grants, Pennsylvania State Grants, Rhode Island Scholarship and Grants, Vermont Incentive Grants,** and several smaller programs in **Indiana, Maryland, Virginia, West Virginia** and **Wisconsin.**

However, the majority of public funding of higher education is provided by the states, and these funds are almost entirely limited to financing higher education within the boundaries of the state providing the funding. Thus, state financing of higher education opportunity ends in most cases at the border, and most students who choose enroll in colleges elsewhere do so without the financial support of the states in which they reside. In effect, these students pass on the state offer to help finance their higher educations if only they would enroll in their home states. Some students can afford to pass up this valuable offer, while others cannot.

Some states view higher education as an industry, with careful attention to the short-term and long-term impacts of higher education. These social benefits from higher education were assessed in three ways by Leslie and Brinkman in their meta-analysis of literature on *The Economic Value of Higher Education* (1988) as:

- *Social rates of return*, which average about 12 percent,
- *National income growth* with higher education adding 4 to 5 percent directly to national income growth, and improvements in knowledge and its applications adding another 20 to 40 percent, and
- *Economic impacts* of colleges on communities in the form of increased business volume that amount to $1.50 to $1.60 per dollar of the college operating budget, and job addition estimated at 59 jobs added per $1 million of college budget.

Net Migration's Share of College Freshmen Enrollment
1994



The economic impact studies that assess higher education's impact on state economies are more limited, but suggest that each dollar of higher education operating budgets produces about $1.60 to $2.00 in business volume, and each million dollars of college budgets adds 63 to 67 jobs.

Interstate migration of college students is important: to students for the opportunities they seek, to institutions for diversity in their student body and the revenue they add, and to communities and states for economic benefits they gain or loose from students who come to a state to enroll or leave a state to enroll elsewhere.

Freshmen Enrolling in College Farther from Home
But Who Can Afford to Go So Far Away?

The proportion of first-time, full-time college freshmen going far away from home to enter college after high school has increased since 1980. Then 34 percent of all first-time, full-time college freshmen entered college more than 100 miles from their homes. By 1995 about 41 percent were entering college more than 100 miles from home.

The previous report in this month's OPPORTUNITY examined destinations of freshmen who emigrate to other states to attend college. In this analysis we examine origins, or more precisely some of the important characteristics of students who go away to college, far away.

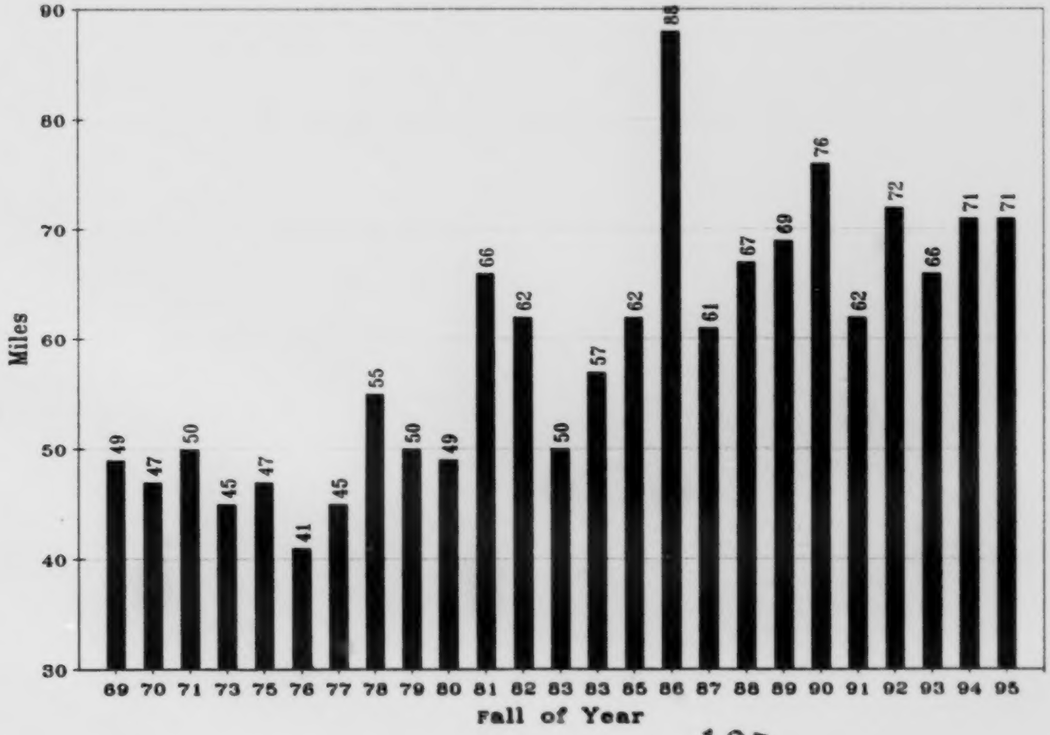
What this analysis finds is that freshmen who enroll in college close to their homes differ in significant ways from those who enter more distant colleges. These differences appear to be closely associated with the socio-economic backgrounds of students, including family incomes, parental educational attainment and other factors.

This spatial analysis of college enrollment is guided by several fundamental economic concepts, including:

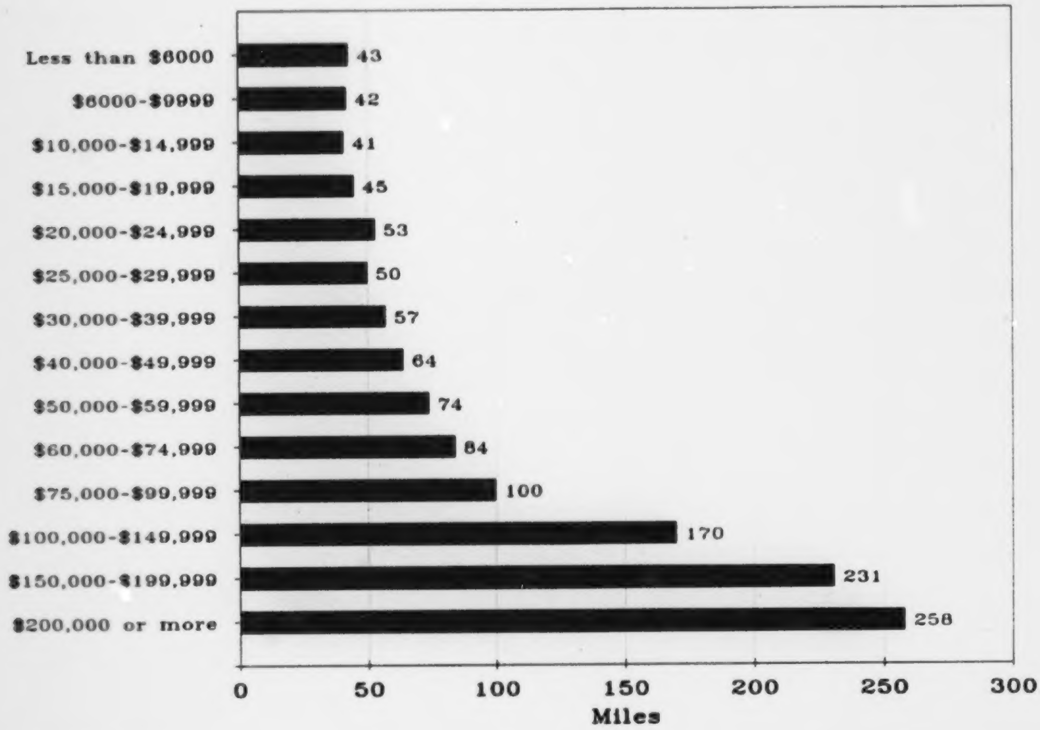
- Distance has economic value, and attending college farther from home costs more than attending college close to home.
- Attending a more distant college implies bypassing intervening educational opportunities.
- College attendance is a riskier decision for students from families with no parental history in higher education.
- Cultural priorities and traditions can impose limits of their own to college access and choice.

In this analysis, we explore three aspects of the relationship between distance from home to college.

- That college freshmen on the whole are choosing to enter colleges farther away from home in the 1990s than they did in the 1970s,
- The ways college freshmen differ from each other in terms of the distance from home to college, and
- The relative importance of the factors that lead college freshmen to bypass intervening colleges and


Median Distance from Home to College for Freshmen 1969 to 1995

Median Distance from Home to College by Parental Income
1995



universities to attend far more distant institutions.

The Data

All data used in these analyses are from published and unpublished tabulations from the annual American college freshman survey, conducted by the Higher Education Research Institute at UCLA and jointly published with the American Council on Education.

Sax, L. J., Astin, A. W., Korn, W.S., and Mahoney, K. M. (1995). *The American Freshman: National Norms for Fall 1995.* Los Angeles: Higher Education Research Institute, UCLA.

Note that the freshman survey collects and reports data on college freshmen who are first-time, full-time students. These tend to be freshmen who are recent high school graduates and relatively young. They better describe freshmen enrollments in 4-year institutions than they do freshmen entering community colleges who are often older and enrolled part-time.

This survey has been conducted and results tabulated and published since 1966. We have used some of the data published in the annual reports. However, much of the special analyses reported here are from tabulations prepared by Bill Korn of UCLA for this study. We are grateful to Bill for his attention to our data requests, especially those requested (and provided) on very short notice.

Trends in Distance to College

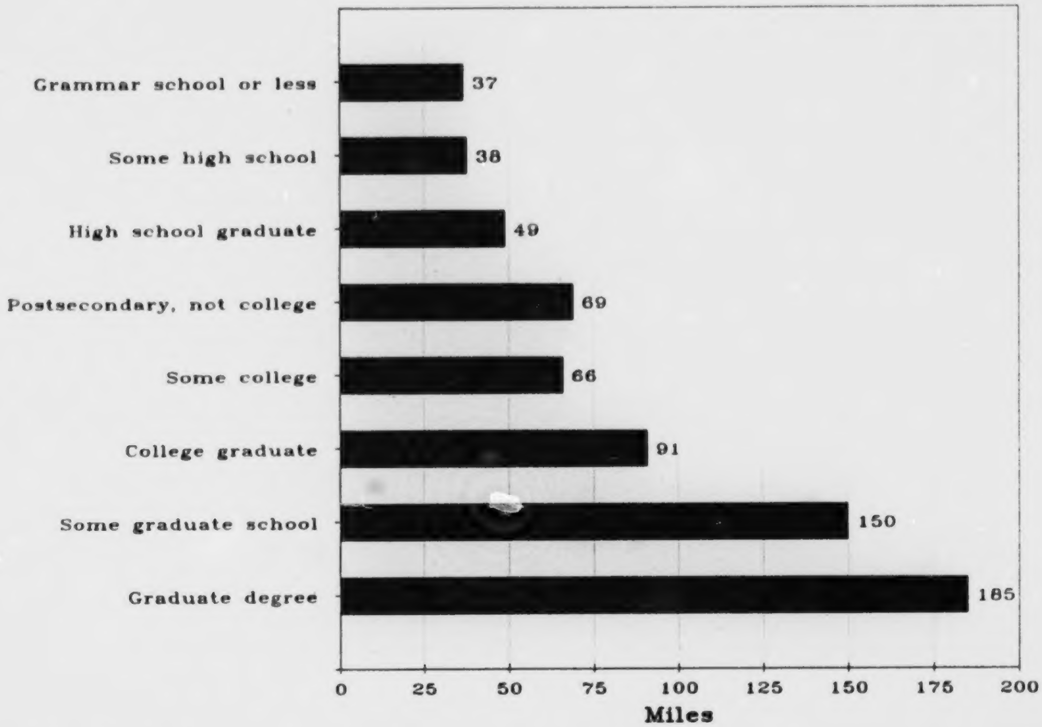
The Freshman Survey has asked college freshmen about the distance from their home to their colleges since the fall of 1969. We have calculated the median distance from home to college for each of the freshmen classes surveyed between 1969 and 1995. These data are shown on the previous page.

The trend in these data is toward college freshmen attending more distance colleges and universities, particularly between about 1980 and 1989. In the 1970s the median distance between home and college averaged about 48 miles. This rose throughout the 1980s, and during the 1990s it has averaged about 70 miles from home to college.

Background Characteristics

Our first exploration of the relationship between distance from home to college is with the pre-college

Median Distance from Home to College by Father's Education 1995



characteristics of college freshmen. These are the environmental variables in which children are raised and over which they have no control.

Parental income: In most research of this type, family income serves as an all-encompassing measure of socioeconomic status. Income is also recognized in federal policy toward postsecondary educational opportunity both through financial aid programs and through outreach programs in Title IV of the Higher Education Act of 1965. Income is also the basis of state need-based student financial aid programs.

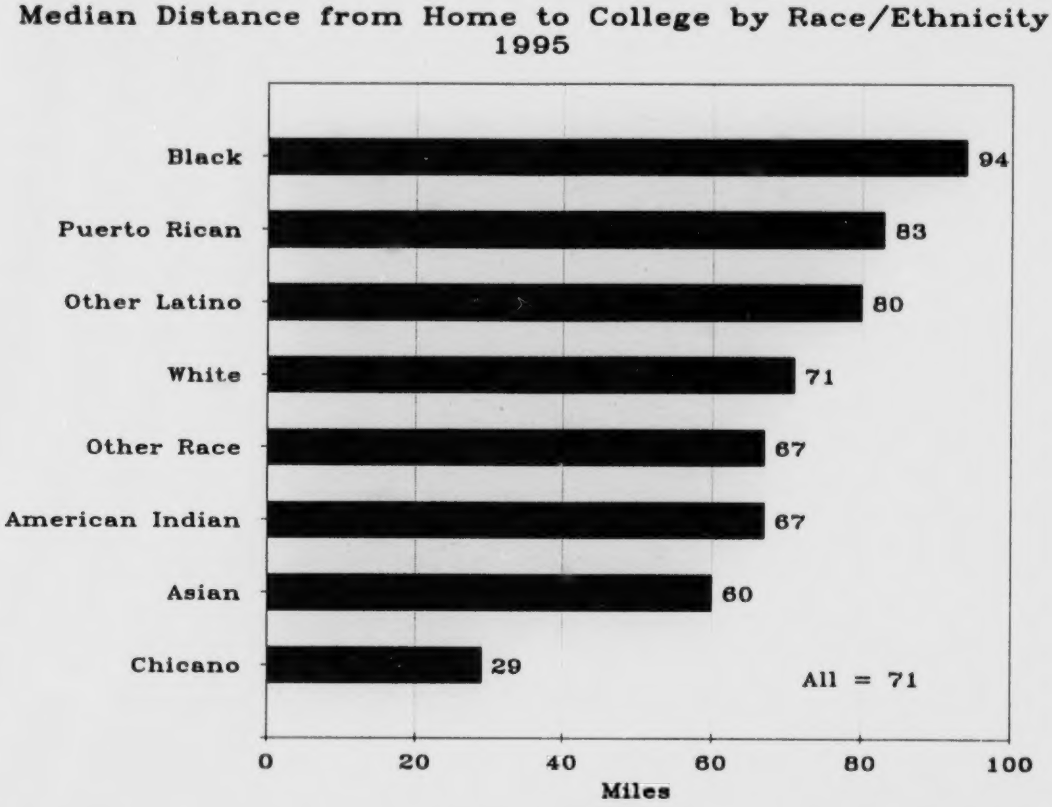
In 1994 most dependent students from families with parental incomes below about $25,000 per year enrolled in colleges less than 50 miles from their homes. Median mileage ranged from 44 for those from families with incomes below $6000 per year, to 49 miles for those from families with incomes of $20,000 to $25,000 per year.

Above this income level, a growing share of freshmen began enrolling in more distant colleges. For those from families with parental incomes of $50,000 to $60,000 per year, the median mileage from home to college was 69 miles. This rose steadily to 261 miles from home to college for those from families with incomes over $200,000.

Father's education: Closely correlated with parental income is father's education. Those freshmen from lowest parental income families will typically also come from families where the father has the least education. This double whammy means that students from these families not only lack the resources to finance postsecondary education but the father/parents also lack the experience of postsecondary education with which to guide their children to college. This adds a risk factor to college attendance.

In 1995 the median distance from home to school for freshmen whose fathers were not high school graduates was about 38 miles. This distance increased to 49 miles for freshmen whose fathers were high school graduates, to 91 miles for those whose fathers were college graduates, and to 185 miles for those whose fathers had graduate degrees from universities.

Race/ethnicity: Distance from home to college varies between racial/ethnic groups, although not as dramatically as for parental income and father's education. In 1994 median mileage from home to college ranged from 94 miles for blacks to 29 miles for Asians.



Institutional Attendance

Students continue their studies in postsecondary education to achieve a variety of objectives. Foremost among these are economic welfare and general educational development. To attain these ends, a variety of educational paths are available to them from which they make choices. Here we examine the single influence of distance on these choices.

Highest degree planned: College freshmen with fairly short-range educational objectives tend to enroll in institutions closest to their homes, usually less than 45 miles away.

Students with greater educational attainment goals, requiring longer periods of enrollment, tend to enroll in institutions that are farther away from their homes. The median distance from home to college for those that aspire to a bachelor's degree was 58 miles in 1994. For the master's degree this increased to 82 miles. For those aspiring to academic or profession doctorates, median distance from home to college was over 120 miles.

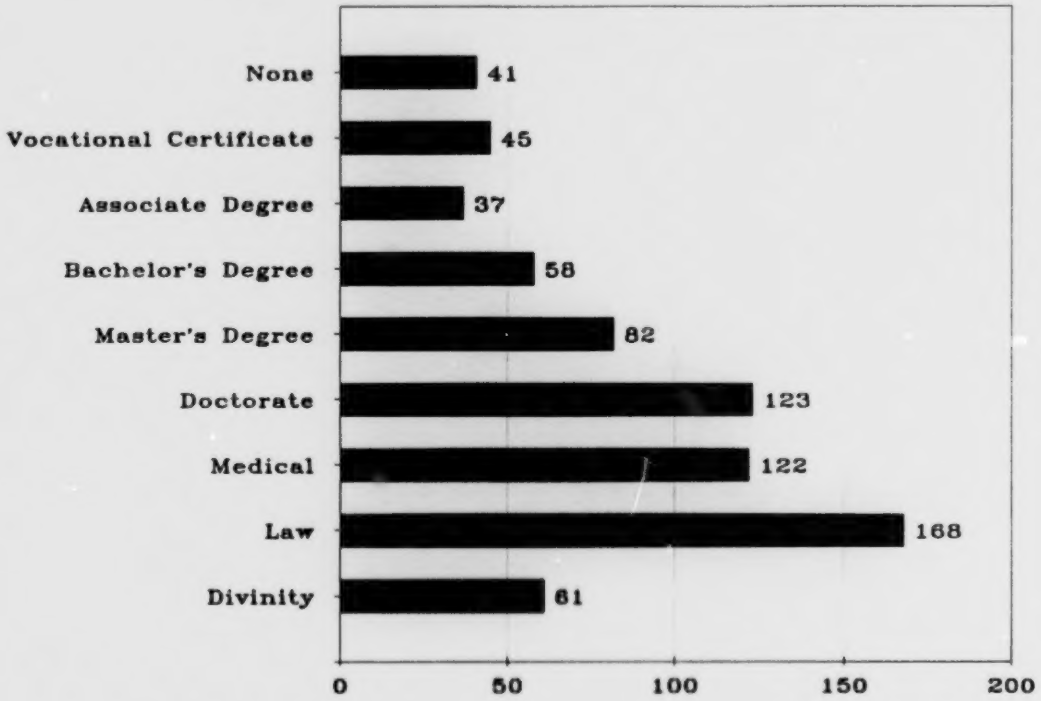
Institutional type, control and academic selectivity: The data describe extraordinary variability in median distance from home to college when institutions are classified by type, control and academic selectivity. In 1994 the median mileage from home to school for freshmen ranged from 33 miles for those attending a community college, to more than 500 miles for those enrolling in highly selective private universities.

Partly this chart captures the effects of family income and its close correlation with selective admissions criteria (test scores, high school grades and ranks). But this chart also reflects the relative drawing power of institutions of different types. Beyond perhaps 50 miles, students are very often bypassing intervening opportunities at lower cost to themselves and their parents to enroll in more distant institutions with particular and strong appeal to the college freshman.

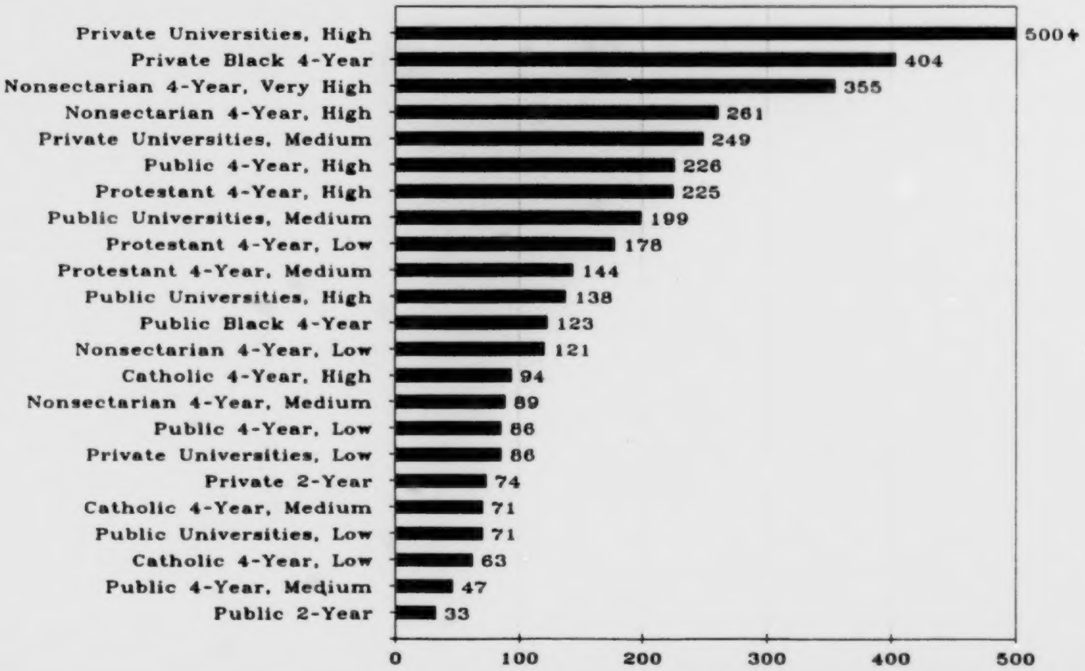
Appeal of Distant Institutions

The UCLA Freshman Survey probes freshmen for their choices both to go on to college after high school and for the factors that influence their choice of the institutions where they enroll. This information is important not only to public policy but also to those who provide information to prospective students about the advantages their institution has to offer.

Median Distance from Home to College for Freshmen by Highest Degree Planned, 1995



Median Distance from Home to College by Institutional Type, Control and Academic Selectivity 1995



Reasons for attending college: Generally college freshmen are interested in attending college primarily for economic and general educational development reasons. But those attending college far from home--over 500 miles--differ from those attending college close to home--5 miles or less--in some obvious and interesting ways.

In this table we have compared the importance of reasons for attending college of freshmen enrolling in college very close to home with those enrolling in college far away from home. The number shown is the difference in importance of each factor between those attending distant colleges and those attending colleges close to home. The positive percentages are more important to those attending college far from home. The negative percentages are less important to those attending college far from home than they are to those attending close to home.

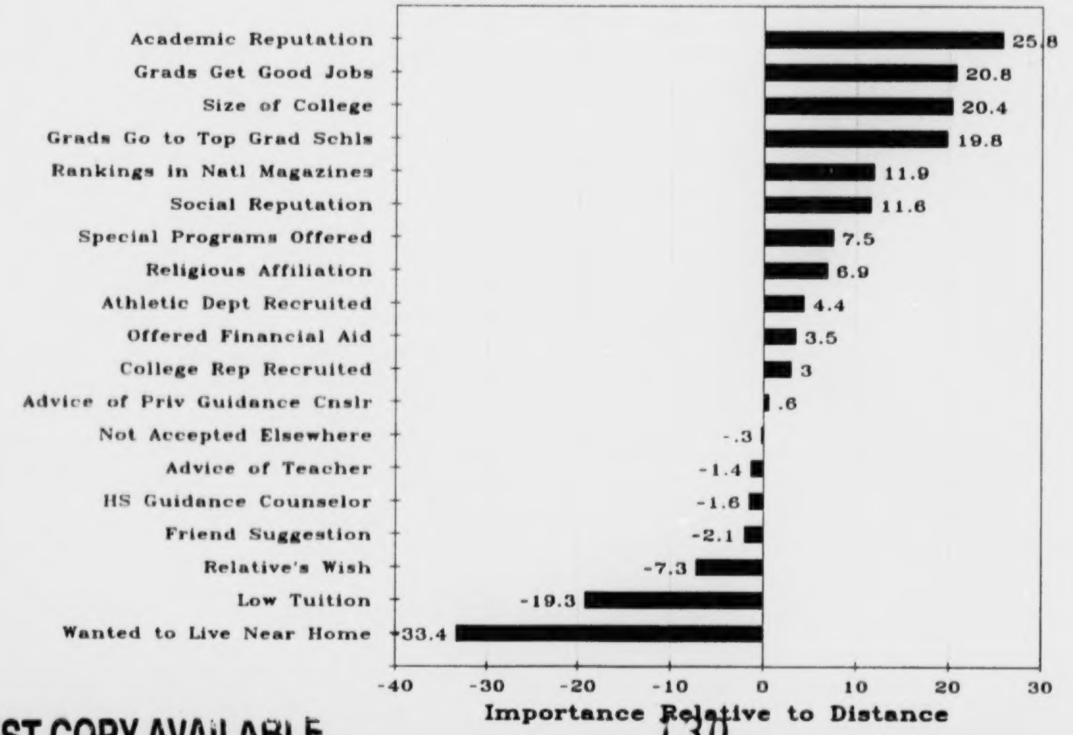
Get away from home	+18.0%
Become more cultured person	+15.7%
Gain general education	+10.6%
Learn more about things	+7.9%
Role model encouraged me	-2.4%
Parent's wish	-4.7%
Couldn't find a job	-6.3%
To get a better job	-9.5%
To make more money	-12.2%

These data indicate that those attending college farthest from home are more interested in getting away from home and general educational development. Those attending college close to home are more interested in the economic value of higher education.

Reasons for college choice: The following chart plots similar data for factors influencing the college choice decision of freshmen. Those factors with large positive percentages are that much more important to freshmen attending college far from home (more than 500 miles) than they are to freshmen enrolled very close to home (5 miles or less). The negative percentages are the factors that are more important to those enrolled very close to home. Generally, for those attending college farthest from home academic factors influenced choice, while financial considerations appear to be most influential for those attending college closest to home.

This spatial analysis of college choice finds that distance from home to college attended significantly differentiates the population of first-time, full-time college freshmen. Those that attend colleges far from home are generally affluent and academically oriented. Those that attend colleges closest to home are generally from limited family income backgrounds and have greater economic expectations from their higher educations.

Importance of College Choice Factors Relative to Distance
1995



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FY1997 State Appropriations for Higher Education: A Year to Cherish

Data from several early surveys of state appropriations for higher education institutions and programs for FY1997 indicate that higher education fared better than it has in any year in this decade. The picture was uneven across the states, as it always is. But on the whole higher education fared better than almost any other state activity and certainly better than it has during the first half of the 1990s.

Among the highlights of state appropriations for FY1997:

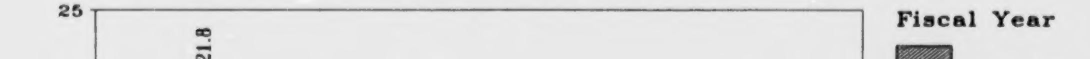
- *Higher education funding for FY1997 was increased by 5.1 percent over FY1996 expenditures. This surpassed all other areas of state funding except for corrections, which continues to gobble a growing share of state budgets. And since state budgets overall increased by 3.9 percent, higher education's share of state budgets increased for a change.*
- *Of 44 reporting states, only seven reduced funding for FY1997 compared to FY1996. Governors and legislators in a number of states appear to have made higher education funding a budget priority in their 1996 legislative sessions.*
- *Included in this growth was funding for state programs of need-based financial aid for undergraduates. Preliminary survey results indicate an increase of 4.5 percent in state funding for student financial aid programs.*

In this data round-up, we review preliminary data collected by OPPORTUNITY and by the National Association of State Budget Officers to understand how this fiscal year differs from the very difficult state funding years from the first half of the 1990s. Certainly a prosperous economy helps, but even in this environment higher education stood out in many states.

State Budget Actions

A strong economy has boosted state tax revenues, which in turn provide the resources for state appropriations. This economy has maintained growth, with relatively low unemployment and inflation.

Annual Changes in Major Expenditure Categories from State General Funds FY1990 to FY1997p



Preliminary Survey of Major State Need-Based Undergraduate Grant Programs
FY1994 to FY1997

		<--------------Recipients			------------->	<------Payout(millions)			------->	<----Average Grant			---->	<----Maximum Grant			---->
State	**Program**	**FY94**	**FY95**	**FY96**	**FY97**	**FY94**	**FY95**	**FY96**	**FY97**	**FY94**	**FY95**	**FY96**	**FY97**	**FY94**	**FY95**	**FY96**	**FY97**
California	Cal Grant A	43,198	49,012	49,012	53,846	$142.2	$154.7	$165.5	$182.9	$3291	$3156	$3377	$3397	$5250	$5250	$5250	$7164
	Cal Grant B	33,067	37,655	37,655	41,222	$72.4	$73.0	$71.7	$75.4	$2191	$1939	$1904	$1829	$6660	$6660	$6660	$8574
Georgia	Student Incentive Grant	11,103	10,621	9,740	4,500	$5.3	$5.1	$4.8	$2.2	$480	$480	$492	$489	$2500	$5000	$5000	$5000
Illinois	Monetary Award Program	119,000	127,218	130,000	128,000	$213.2	$239.7	$254.2	$264.1	$1792	$1884	$1955	$2063	$3500	$3800	$3900	$4000
	IL Incentive for Access	0	0	0	22,000	$0.0	$0.0	$0.0	$9.0	-	-	-	$409	-	-	-	$500
Indiana	High Ed/Freedom Choice	55,846	49,232	49,160	50,912	$55.4	$57.5	$66.1	$75.6	$992	$1168	$1345	$1485	$3431	$4106	$4680	$5152
Iowa	Iowa Tuition Grant	14,323	14,453	14,500	14,454	$31.5	$32.3	$35.7	$38.7	$2201	$2235	$2462	$2677	$2600	$2650	$2900	$3150
Kansas	Tuition Grant	3,200	3,658	3,434	3,434	$5.4	$5.6	$5.6	$5.6	$1688	$1531	$1631	$1631	$1700	$1700	$1700	$1700
Kentucky	College Access Program	17,440	21,400	22,600	24,200	$12.6	$17.2	$18.4	$20.3	$724	$804	$814	$839	$840	$960	$980	$1000
	Kentucky Tuition Grant	6,360	7,700	5,700	6,000	$7.1	$8.3	$7.9	$8.4	$1113	$1078	$1386	$1400	$1200	$1200	$1500	$1500
Louisiana	Tuition Assistance Prog	2,040	2,114	2,300	3,461	$4.3	$4.4	$4.9	$7.9	$2108	$2081	$2130	$2283	$2631	$2645	$2663	$2687
Maine	Student Incentive Schlr	9,500	10,413	12,057	11,200	$5.2	$7.2	$7.0	$7.0	$544	$691	$581	$625	$1000	$1000	$1000	$1000
Massachusetts	MASSGrant Program	32,600	29,705	32,500	32,500	$34.3	$33.0	$34.3	$33.3	$1052	$1111	$1055	$1041	$2500	$2500	$2500	$2500
	Gilbert Matching Grant	3,665	4,100	4,850	5,000	$4.0	$7.0	$9.0	$9.0	$1091	$1707	$1856	$2000	$2500	$2500	$2500	$2500
	Cash Grant/Tuition Waivr	15,351	15,351	15,417	15,500	$19.9	$19.9	$22.4	$22.4	$1296	$1296	$1453	$1445	<--------Tuition-------->			
Michigan	Competitive Scholarships	25,900	26,55[illegible]	28,228	28,600	$32.5	$32.3	$34.1	$34.5	$1255	$1216	$1208	$1206	$1200	$1200	$1200	$1200
	Tuition Grant	28,954	31,704	30,675	31,000	$43.3	$45.7	$48.4	$50.5	$1495	$1441	$1578	$1629	$1900	$1975	$2172	$2250
Minnesota	State Grant Program	72,644	69,822	64,500	64,500	$95.7	$87.8	$92.0	$92.0	$1317	$1257	$1426	$1426	$5889	$5889	$5890	$5932
Missouri	Student Grant Program	8,779	9,185	9,247	10,300	$11.1	$11.8	$12.1	$13.4	$1262	$1284	$1309	$1301	$1500	$1500	$1500	$1500
New Jersey	Tuition Aid Grant	57,673	58,752	59,873	61,073	$109.0	$118.4	$132.0	$135.4	$1890	$2015	$2261	$2217	$4790	$5210	$5570	$5570
	Educational Opportunity	11,805	13,574	13,627	13,627	$10.9	$11.7	$13.0	$13.2	$923	$862	$954	$969		$1950	$2100	$2100
New Mexico	Incentive Grants	9,613	11,181	11,700	12,100	$6.4	$7.0	$7.9	$8.2	$670	$622	$678	$675	$2500	$2500	$2500	$2500
New York	Tuition Assistance Prog	294,000	295,713	289,032	291,000	$606.8	$631.1	$624.2	$644.5	$2064	$2134	$2160	$2215	$4050	$4050	$3900	$3900
	Aid for Part-Time Study	22,337	24,286	25,733	27,000	$12.0	$13.2	$13.5	$14.0	$537	$544	$525	$519	$2000	$2000	$2000	$2000
Ohio	Instructional Grants	80,000	87,140	90,000	92,000	$74.0	$79.7	$81.0	$87.3	$925	$914	$908	$949	$3606	$3750	$2750	$3740
Oklahoma	OK Tuition Aid Grant	16,849	19,059	18,829	22,000	$13.4	$14.9	$14.8	$17.0	$792	$782	$786	$773	$1000	$1000	$1000	$1000
Oregon	Need Grant	13,260	14,455	14,460	16,000	$13.6	$13.8	$13.6	$15.7	$1026	$955	$941	$981	$3150	$3180	$2860	$3228
Pennsylvania	State Grant Program	132,441	143,318	152,200	156,100	$188.8	$215.6	$232.0	$237.0	$1425	$1504	$1524	$1518	$2500	$2600	$2632	$2632
Puerto Rico	Educational Funds		28,347	NA	NA		$10.0	$10.0	$13.5								
	Legislative Grants		15,605	NA	NA		$7.2	$8.6	$8.9								
	Supplementary Aid Prog		8,399	NA	NA		$4.3	NA	NA								
Rhode Island	Scholarship/Grant Prog	13,700	11,898	10,357	10,700	$6.5	$6.3	$5.7	$6.3	$474	$529	$550	$589	$1000	$900	$700	$700
So Carolina	Tuition Grants	8,375	8,430	8,969	9,288	$16.1	$16.7	$18.6	$20.9	$1922	$1981	$2074	$2250	$2890	$3030	$3420	$4060
Tennessee	Student Assistance Awds	19,497	21,669	21,847	22,000	$15.7	$18.3	$18.8	$19.4	$806	$845	$861	$882	$1482	$2322	$2682	$3042
Texas	Tuition Equalization Gr	17,240	17,473	22,471	22,471	$25.2	$26.2	$37.1	$37.1	$1450	$1499	$1651	$1651	$2343	$2565	$2640	$2640
Vermont	Incentive Grant Program	12,971	12,483	13,576	13,720	$10.8	$11.8	$12.0	$11.4	$834	$945	$885	$831	$5050	$5200	$5200	$5200
Virginia	Discretionary Aid	31,575	31,269	33,121	33,200	$39.8	$56.7	$63.2	$63.2	$1262	$1813	$1908	$1904	$4414	$4556	$4738	$4906
	College Scholarship Asst	7,955	8,148	8,784	7,500	$5.9	$6.0	$5.8	$5.1	$736	$731	$657	$678	$2000	$5000	$5000	$5000
Washington	State Need Grant	38,000	44,800	41,300	43,400	$46.0	$52.9	$56.3	$57.7	$1209	$1181	$1363	$1326	$2625	$2740	$2805	$2875
West Virginia	Higher Educ Grant Prog	4,766	5,274	6,307	7,000	$5.4	$6.6	$8.2	$10.2	$1225	$1251	$1300	$1457	$1968	$1944	$2136	$2216
Wisconsin	WI Higher Educ Grant	42,366	42,155	43,100	43,250	$23.3	$25.4	$25.2	$25.2	$549	$603	$585	$583	$1800	$1800	$1800	$1800
	WI Tuition Grant	8,841	8,889	8,925	8,995	$16.3	$16.2	$16.0	$16.0	$1847	$1822	$1793	$1779	$2172	$2172	$2172	$2172
	Talent Incentive Grant	4,989	5,235	5,222	5,545	$5.2	$5.6	$5.2	$5.0	$1042	$1070	$996	$902	$1800	$1800	$1800	$1800
	TOTALS*	1,351,223	1,405,102	1,421,008	1,468,598	$2,047	$2,197	$2,298	$2,402	$1515	$1563	$1617	$1636	$6660	$6660	$6660	$8574
	Change		4.0%	1.1%	3.3%		7.3%	4.6%	4.5%		3.2%	3.5%	1.1%				

*Totals do not include Puerto Rico due to incomplete reporting.
Note: Major state grant programs not reported for Florida and Maryland.

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The strength of state tax revenues enabled states to cut taxes by $3.6 billion in FY97 from FY96 collections. This follows a tax cut of $3.6 billion in FY96 from FY95 collections.

FY1997 spending will decline again for AFDC as it did in FY96. Medicaid spending increases will continue to slow in FY1997. Corrections leads spending increases across all categories with a 6.8 percent increase in FY97 over FY97.

Higher education received the second largest percentage increase in funding for FY1997. Of 44 states reporting in the NASBO survey, only seven reduced funding from FY96. **Vermont** had the largest proportional decrease due to weak economic conditions and elimination of a budget deficit carried over from FY1995. **Oklahoma** had the largest state funding increase at 12.4 percent.

State-specific detail will be released later this fall and will be reported here in OPPORTUNITY when it becomes available.

Student Financial Aid

Based on OPPORTUNITY's survey of the major state need-based student grant programs, funding for FY1997 student aid will increase by 4.5 percent over FY1996 expenditures. About $2.4 billion was appropriated for the major state grant programs reported in this survey.

States with large funding increases were **Louisiana** (+38%), **Puerto Rico** (+25.9%), **West Virginia** (+19.6%), **Oregon** (+13.4%), **Oklahoma** (+12.9%). Four states reduced funding for major state grant programs. **Georgia** halved funding for its Student Incentive Grants and lost its federal SSIG matching funding. **Wisconsin, Massachusetts, Vermont** and **Virginia** made smaller grant program funding reductions for FY1997 compared to FY1996.

A projected 1.4 million undergraduates will receive state need-based grants through these programs. This is an increase of 3.3 percent over FY1996.

The states with grants for the largest numbers of needy undergraduate students are also the largest states: **New York, Pennsylvania, Illinois** and **California**. These four states enroll 30 percent of the undergraduates, will make 49 percent of the state grants, and will award 59 percent of the state grant dollars in FY1997.

The average grant received by undergraduates will be $1636 in FY1997, up from $1617 in FY1996. These sums have grown slowly, largely because larger states appropriations in recent years have been spread out over more students. This adds breadth to state need-based grant program participation, but reduces purchasing power of these grants for the most needy undergraduate students.

On balance, state funding for higher education generally and need-based grants for undergraduate students in particular was very good. These preliminary reports will be completed and published later in the year. When combined with the tuition reports, a more complete picture of higher education finance will emerge.

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Postsecondary Education OPPORTUNITY

The Mortenson Research Seminar on Public Policy Analysis of Opportunity for Postsecondary Education

Number 51 **Iowa City, Iowa** **September 1996**

Not all freshmen . . . . . . are the same

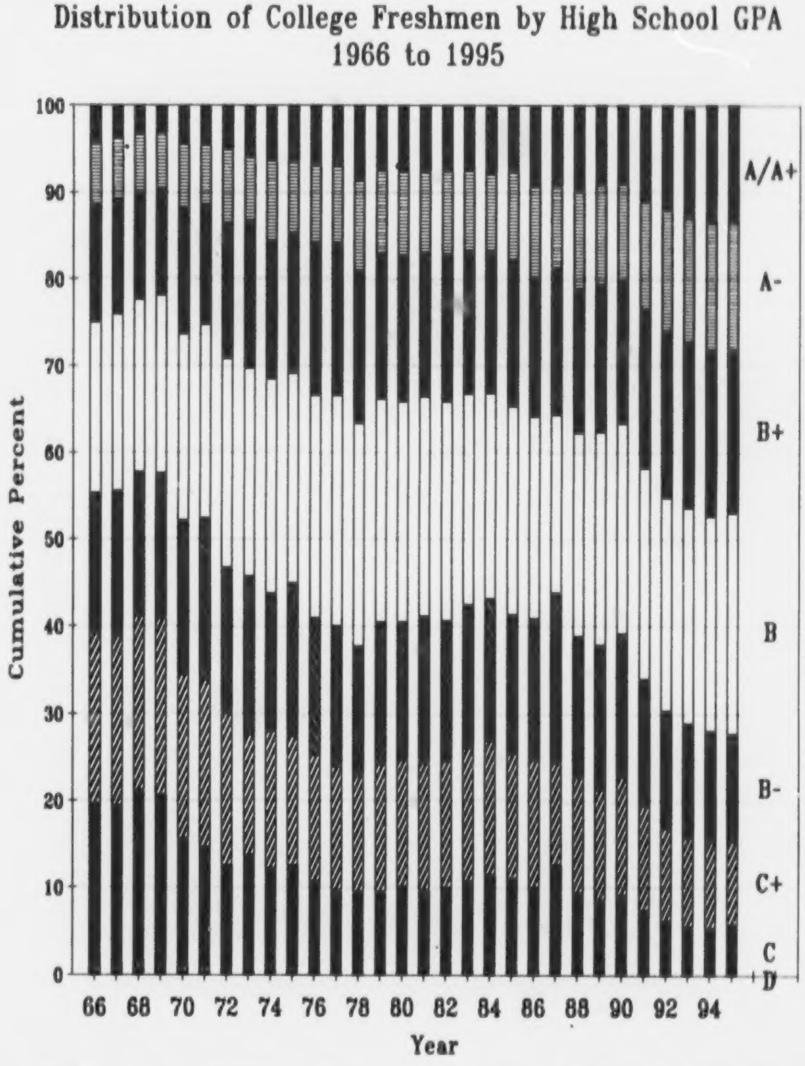
High School Grades of College Freshmen: Who Gets What Grades?

High school grades are an important and widely used measure of the achievement of students in secondary education. As such, they are important to the admissions decisions of selective admissions colleges. They are also important to financial aid decisions in those institutions that practice preferential aid packaging--those colleges that offer more grant aid and less loans to financially needy students that the institution finds especially attractive and wants to enroll.

In some states, high school grades determine eligibility for state merit-based scholarship programs (see article in this issue). ***Georgia's*** *HOPE scholarship program (whose title has been adopted by President Clinton for another in his continuing series of new financial aid program proposals) requires a B-average for eligibility. So do some financial aid programs in other states.*

But not all types of students get the best high school grades required for selective college admission, financial aid packages weighted with scholarships instead of loans, and access to state-financed merit-based scholarship assistance. Our analysis of data finds that:

- *Females are more likely than males to get the best high school grades.*
- *Students from families with incomes of more than $50,000 per year are more likely to get good high school grades than are students from families with incomes below $15,000 per year.*
- *Students from families with college-educated parents are more likely to get the best high school grades than are students whose parents*



Distribution of College Freshmen by High School GPA 1966 to 1995 *have a high school education or less.*

In this analysis, we examine the relationship between high school grades and background characteristics of college freshmen. What we find is that high school grades are awarded neither uniformly nor randomly across different groups of high school students who enroll in college. Some groups of college freshmen are more likely to report good high school grades than are other students. Because of the differences in high school grade distribution across different groups of college freshmen, different groups face hurdles of different heights in college admission and financial aid.

Some policy and decision makers and program administrators may be comfortable with these differences. Others may be struggling to level the playing field at the critical transition between high school and college.

Regardless of one's position on these differences, we believe it important that those making decisions regarding the educational opportunities made available to young people be aware of the differential impact of their decisions on different groups of students. Admissions and financial aid decisions favoring students with high school grades of B or better distinctly favor females over males, Asians and whites over blacks and Chicanos, those from wealthy families over those from poor families, those with college educated parents over those whose parents do not have college educations, those with two parents over those whose parents do not live together or one or both are dead and those attending more academically selective institutions over those attending less selective institutions.

OPPORTUNITY has reported often on academic backgrounds of college students, particularly academic preparation for college. In 1983 *A Nation at Risk* recommended that high school students taking coursework to prepare for college take 4 years of English, 3 years each of mathematics, science and social studies, and 1/2 year of computer science. This curriculum was called the "New Basics."

Subsequent studies have shown an increase in graduating high school seniors completing the New Basics curriculum from 13 percent in 1982 to 47 percent by 1992. These data have been reported by gender, race/ethnicity, urbanicity, control of school and parental educational attainment. (See OPPORTUNITY #37, July 1995.)

More recently (May 1996) we updated our previous analysis of academic core course taking of those college-bound high school seniors who take the ACT Assessment. Between 1987 and 1995 the proportion completing this curriculum increased from 38 to 59 percent. Again, we reported these data by gender, race/ethnicity and family income.

The Data

In this analysis of high school grade point average of college freshmen we use published and unpublished data from the 1995 Freshman Survey.

Sax, L. J., Astin, A. W., Korn, W. S., and Mahoney, K. M. (1995). *The American Freshman: National Norms for Fall 1995.* Los Angeles: Higher Education Research Institute, UCLA.

Copies of the complete published survey are available from UCLA for $26.79 each by calling (310) 825-1925.

In addition to the published data, we requested and Bill Korn of UCLA supplied additional cross-tabs that are summarized in this report.

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Mission Statement

This research letter is founded on two fundamental beliefs. First, sound public social policy requires accurate, current, independent, and focused information on the human condition. Second, education is essential to the development of human potential and resources for both private and public benefit. Therefore, the purpose of this research letter is to inform those who formulate, fund, and administer public policy and programs about the condition of and influences that affect postsecondary education opportunity for all Americans.

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The Freshman Survey data are limited to first-time, full-time college freshmen. They best describe freshmen starting out in 4-year colleges and universities. They are less complete when describing community college enrollments because these institutions typically enroll much older undergraduates than do 4-year colleges and universities. But even here, these data provide useful comparative information on an important part of the community college student body as well.

The analyses summarized in chart form here describe the high school grades of college freshmen grouped in terms of several background variables:

- Gender
- Race/ethnicity
- Parental income
- Parental education
- Parental status

In addition, we describe very generally the grade profiles of freshmen entering higher education institutions by control, type and academic selectivity.

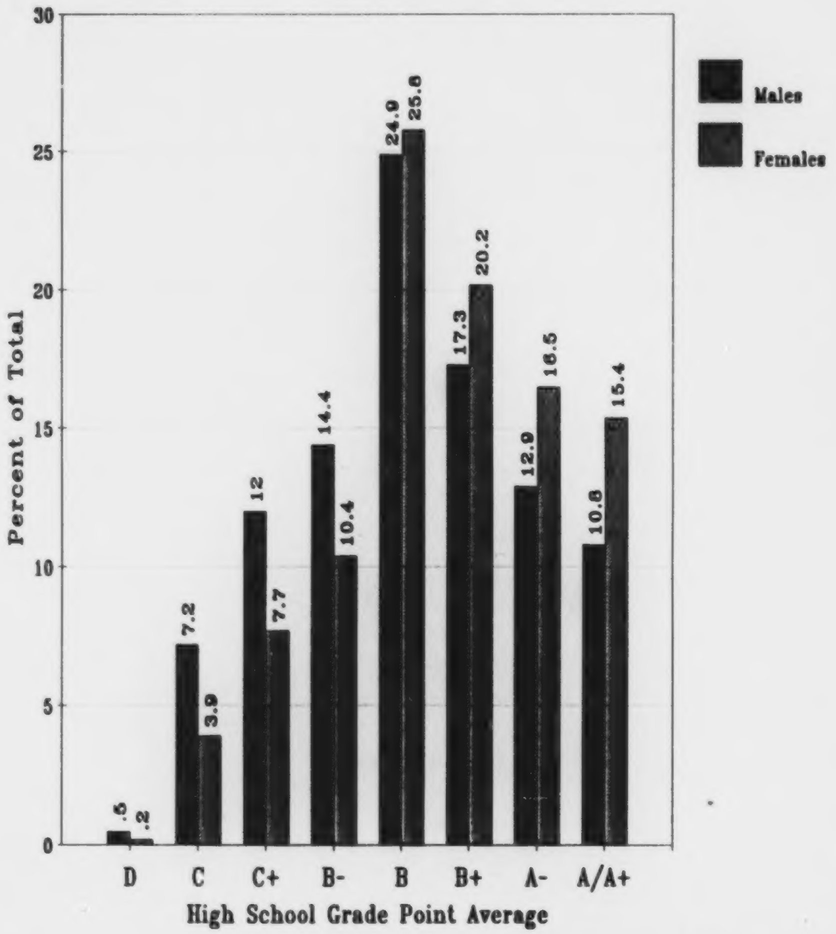
The results of this analysis should not surprise those within higher education whose responsibilities cover admission, financial aid and student support services to students. What is not clear, however, is that public policy makers are aware of this information.

Average High School Grades

Overall, in 1995 72.3 percent of all first-time, full-time college freshmen in America reported average high school grades of B or better. The proportion reporting high school grade point averages at each grade level were:

A or A+	13.3%
A-	14.8
B+	18.8
B	25.4
B-	12.2
C+	9.7
C	5.4
D	0.4

Distribution of College Freshmen by Gender
and High School Grade Point Average
1995



In 1966, the initial year of the Freshman Survey, 44.7 percent of all college freshmen reported high school grade averages of B or better. By 1975 this had risen to 55.1 percent, and by 1985 to 58.7 percent as shown in the chart on page 1 of this issue of OPPORTUNITY.

Among college freshmen, the proportion reporting high school grade averages of A- or better has increased from a low of 9.5 percent in 1969 to a peak of 28.1 percent by 1995. The growth in college freshmen reporting this very high grade average from high school appears to be especially sudden and significant in the 1990s.

Does the growth in high school grade averages among college freshmen reflect greater achievement? The SAT and ACT data on high school seniors who took these tests are not confirming in this regard.

Between 1966-67 and 1993-94, the average SAT verbal score *declined* from 466 to 423, while the average

SAT math score *declined* from 492 to 479.

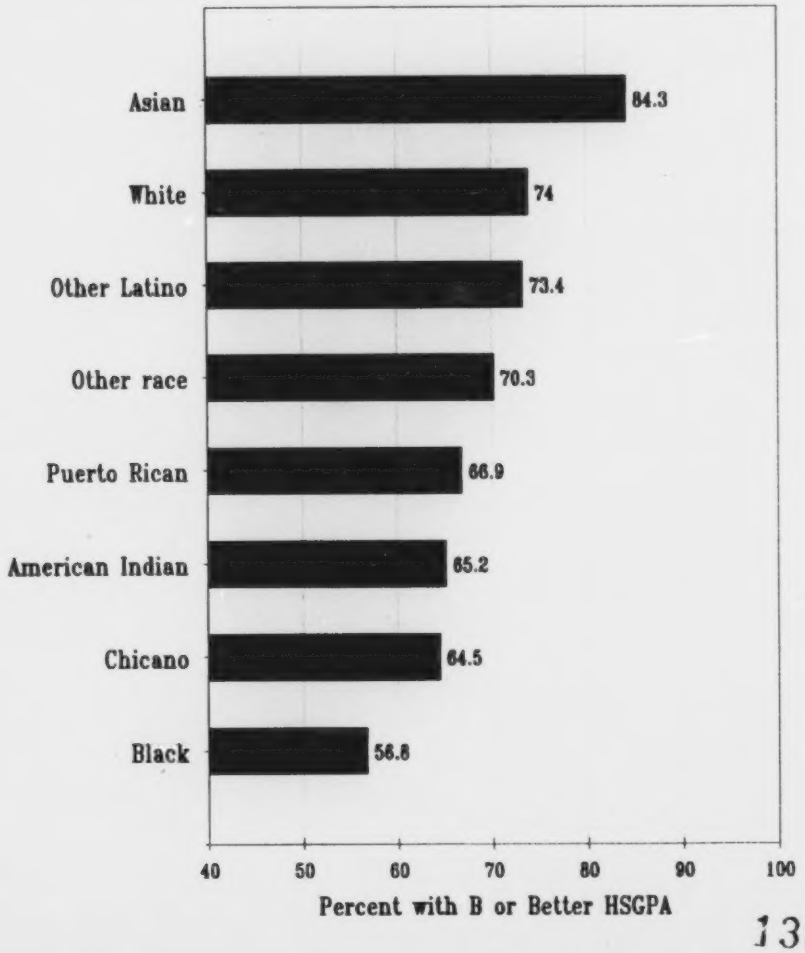
The renorming of the ACT Assessment in 1990 makes comparisons over this span of time difficult, but here too average ACT composite scores appear to have *declined* between 1967 and 1994. Roughly speaking, under the more recent scoring system, the ACT composite score appears to have declined from about 21.9 in 1967 to 20.8 in 1994. The most obvious explanation for the disparity between rising high school grades and declining college admissions test scores is substantial high school grade inflation over the last 30 years.

Grades by Gender

In 1995 65.9 percent of all male college freshmen reported that they had average high school grades of B or better. By comparison, 77.9 percent of all female college freshmen reported this. This difference was 12.0 percent.

Across institutional types and control, the difference between females and males in the proportion of freshmen with B or better high school grade averages varied widely. In 1995 by institutional type and control, the differences between females and males were:

Public black college	20.4%
Private black college	17.1
Private 2-year	16.4
Protestant 4-year	14.9
Public 4-year	14.1
Nonsectarian 4-year	13.7
Public 2-year	13.4
Catholic 4-year	11.3
Public university	7.8
Private university	3.9


College Freshmen with High School Grade Point Averages of B or Better by Race/Ethnicity 1995

Over the 30 year period of the Freshman Survey, The difference between males and females on high school achievement as measured by high school grade averages has narrowed substantially. Between 1966 and 1995, the proportion of male college freshmen reporting high school grade averages of B or better rose by 21.2 percent, from 44.7 to 65.9 percent. During the same period, the proportion of female college freshmen reporting high school grade averages of B or better rose by 11.4 percent, from 66.5 to 77.9 percent. The difference between males and females narrowed steadily and substantially between the late 1960s through 1991, and has reopened somewhat between 1991 and 1995.

Grades by Race/Ethnicity

In 1995, the proportion of college freshmen from different racial/ethnic groups reporting high school grades of B or better ranged widely. Asians reported the highest proportion of freshmen with B or better high school grades at 84.3 percent. Blacks reported the lowest proportion at 56.8 percent. These data are shown on the chart.

Asians also topped the list of freshmen reporting high school grades of A-, A or A+ with 44.7 percent--nearly half of all Asian college freshmen. The other racial/ethnic groups and the proportion of freshmen reporting A- or higher high school grade averages were:

Other race	29.2%
White	29.1
Other Latino	27.9
American Indian	27.9
Chicano	21.1
Puerto Rican	20.2
Black	15.1

Grades by Parental Education

High school grade averages are also strongly related to the educational attainment of the freshman's father and mother. As shown in the chart on this page, the proportion of college freshmen with high school grade averages of B or better was lowest--at less than 60 percent--where the father and mother had grammar school educations or less. About 80 percent of the freshmen whose parents had at least some post-baccalaureate education reported high school grade averages of B or better in 1995.

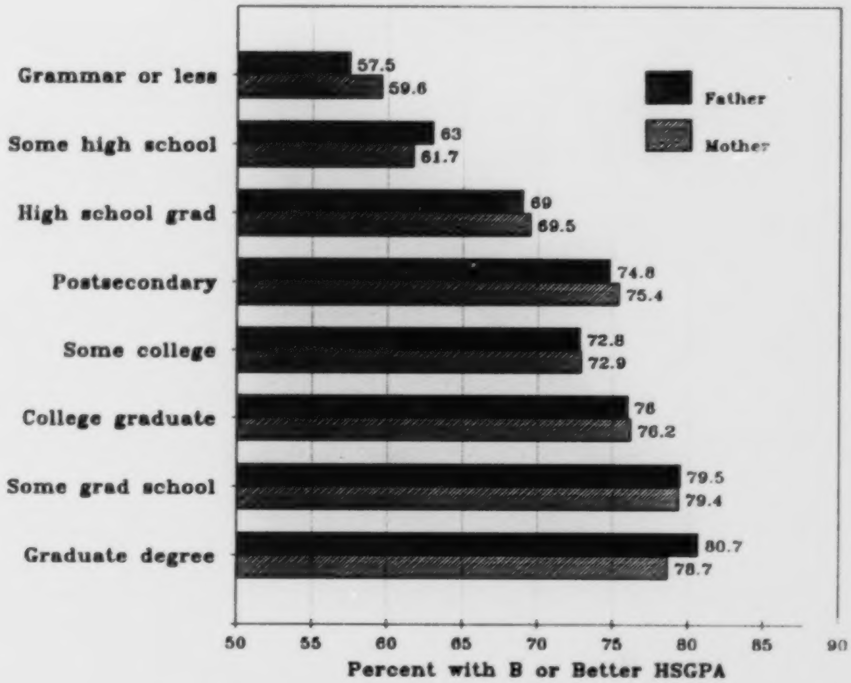
This pattern becomes even more pronounced when we focus on the proportion of freshmen reporting high school grades of A- or better. Here we focus just on father's education.

Grammar or less	14.5%
Some high school	18.0
High school graduate	21.9
Postsecondary	28.0
Some college	27.4
College graduate	32.5
Some graduate school	40.4
Graduate degree	41.2

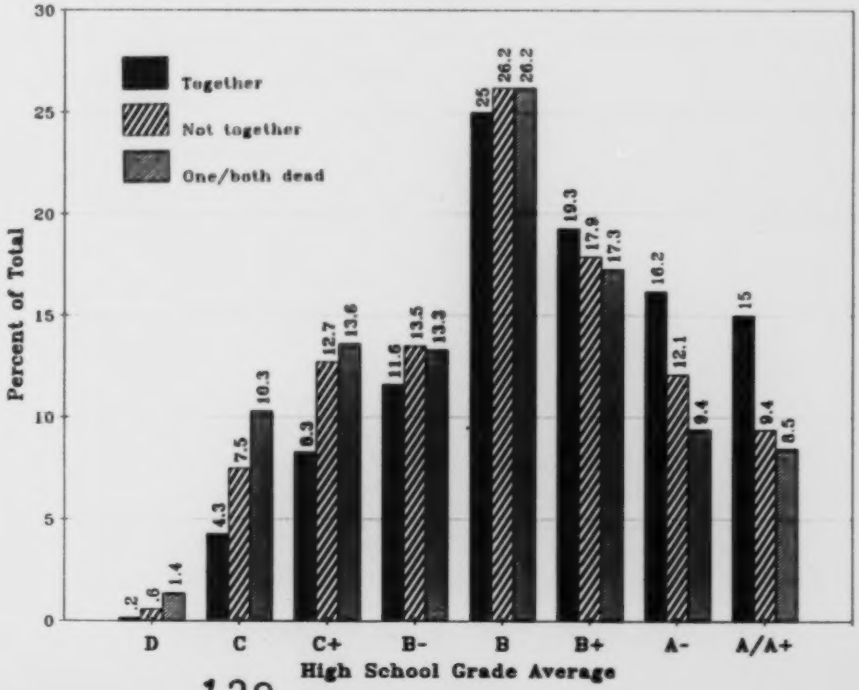
Grades by Parental Status

College freshmen who come from 2-parent families report higher high school grade averages than do freshmen from other parental situations. Where the parents lived together, 75.5 percent reported high school grade averages of B or better. Where the parents did not live

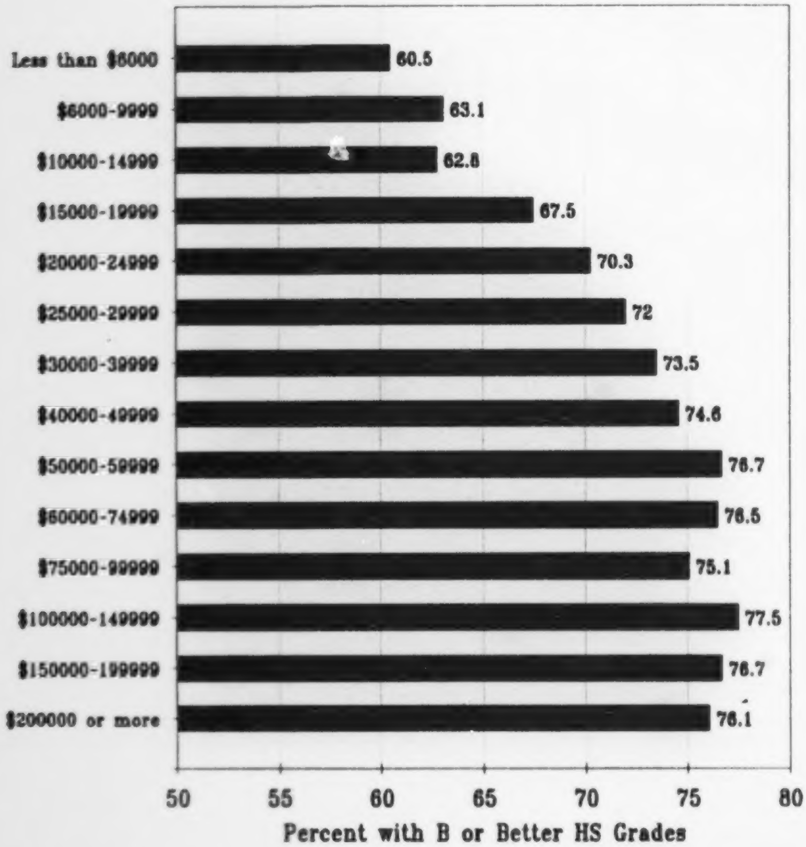
College Freshmen with High School Grade Averages of B or Better by Parent's Education 1995



Distribution of College Freshmen by Parent's Status and High School Grade Average 1995



College Freshmen with High School Grade Averages of B or Better by Parental Income 1995



together, 65.6 percent reported B or better high school grades. Where one or both parents were dead, 61.4 percent had B or better high school grade averages. When both parents lived together, freshmen were nearly twice as likely as freshmen from other families to report high school grade averages of A- or higher.

Grades by Parental Income

Up to about $50,000 in parental income, there is a strong relationship between high school grades and parental income. At parental incomes of less than $6000 per year, about 60 percent of all college freshmen report high school grade averages of B or better. By $50,000 to $60,000 per year parental income, and from that level on up, more than three-quarters of college freshmen report high school grade averages of B or better.

Similar effects hold for freshmen reporting high school grade averages of A-, A or A+. The proportion of freshmen reporting high school grade averages of A- or better stood at 16.9 percent of those whose parental incomes were less than $6000 per year. This percentage increased steadily with income to about 35 percent of those from families with incomes greater than $100,000 per year in 1995.

Grades by Institutional Control, Type and Academic Selectivity

The socio-economic sorting processes that begin before K-12 education are further accentuated by the sorting processes of college admission and financial aid. Students with the best high school grade averages do not distribute themselves randomly across higher education institutions. They are concentrated in some types of institutions and mixed with students with lesser records of academic achievement from high school in other types of institutions. At one end of this spectrum, 99 percent of all freshmen entering highly selective private universities report that they had high school grade averages of B or better. At the other end of the spectrum, 50 percent of those entering public black colleges had accumulated B or better grade averages in high school.

Obviously, the most academically selective colleges and universities are likely to attract the greatest concentrations of freshmen with the strongest high school grades. But beyond academic selectivity, universities--both public and private--attract freshmen with the strongest high school achievement records. And generally 2-year colleges attract freshmen with the most diverse records of high school grades.

We have also examined *changes* in the proportion of college freshmen with high school grades of B or better by institutional control, type and academic selectivity. We have chosen the period between 1980 and 1995 during which to measure this change primarily because of the sharp cutbacks in federal and state investment in higher educational opportunity during this period.

As shown in the chart, the institutions that gained the most in proportion of freshmen with high school grades of B or better were black colleges--both private and public--and institutions of medium academic selectivity. During this same period the largest losers were 2-year colleges, both public and private. A possible interpretation of this shift is that some students with high school grade averages of B or better shifted their enrollments from 2-year colleges to 4-year colleges with medium academic selectivity criteria.

Conclusions

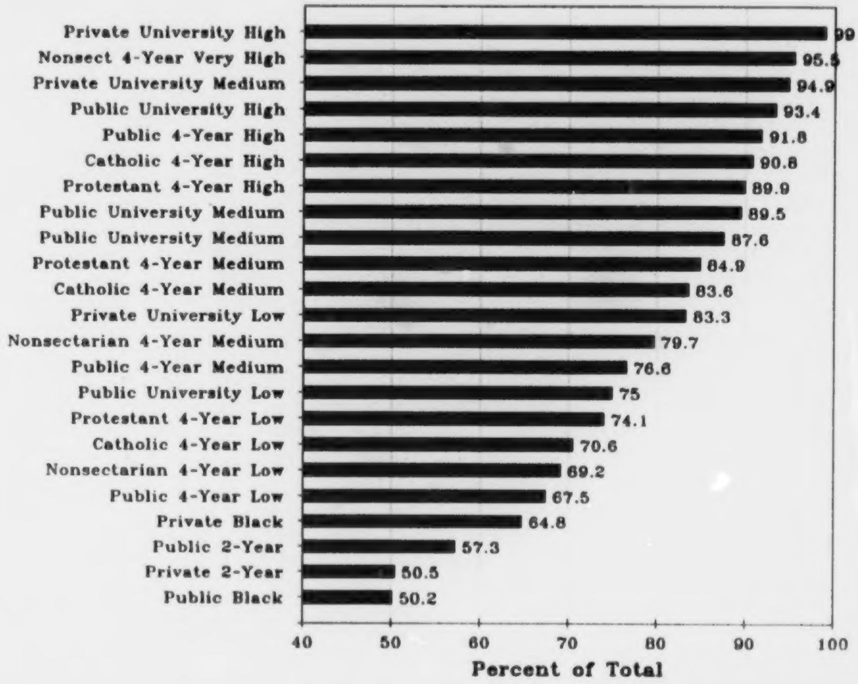
This analysis has sought to illustrate the differential effects of admissions and financial aid decisions on students with varying levels of high school grades. Admissions and financial aid policies that favor students with strong records of high school achievement also favor students from some backgrounds more than others. *Significantly, these are background characteristics that students are born with. They are not characteristics over which students have personal control and may therefore be held accountable for in admissions and financial aid policy and decisions.*

Using B or better high school grades as a reference for such decisions:

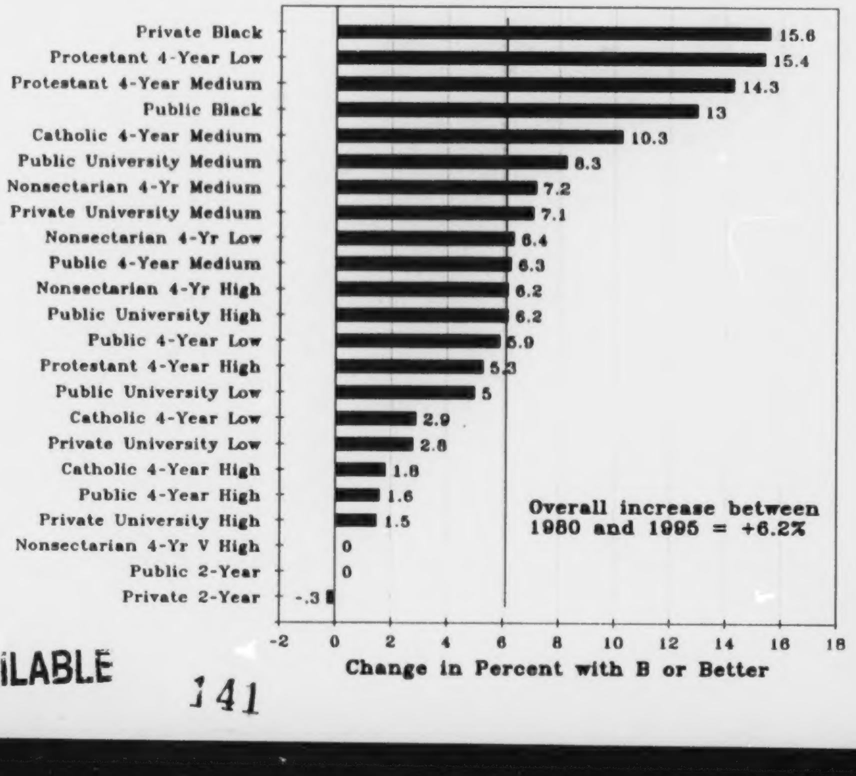
- Females are favored over males.
- Asians and whites are favored over blacks, Chicanos, American Indians and Puerto Ricans.
- Students with college-educated parents are favored over other students whose parents have a high school education or less.
- Students from 2-parent families are favored over students living with one parent or where one or both parents are dead.
- Students from families with incomes over $50,000 per year are favored over students from families with lesser incomes.

Now that you know this, are you still comfortable with admissions and financial aid decisions based on high school achievement?

College Freshmen with B or Better High School Grades by Institutional Control, Type and Academic Selectivity 1995



Change in College Freshmen with B or Better HS Grades by Institutional Control, Type and Academic Selectivity 1980 to 1995



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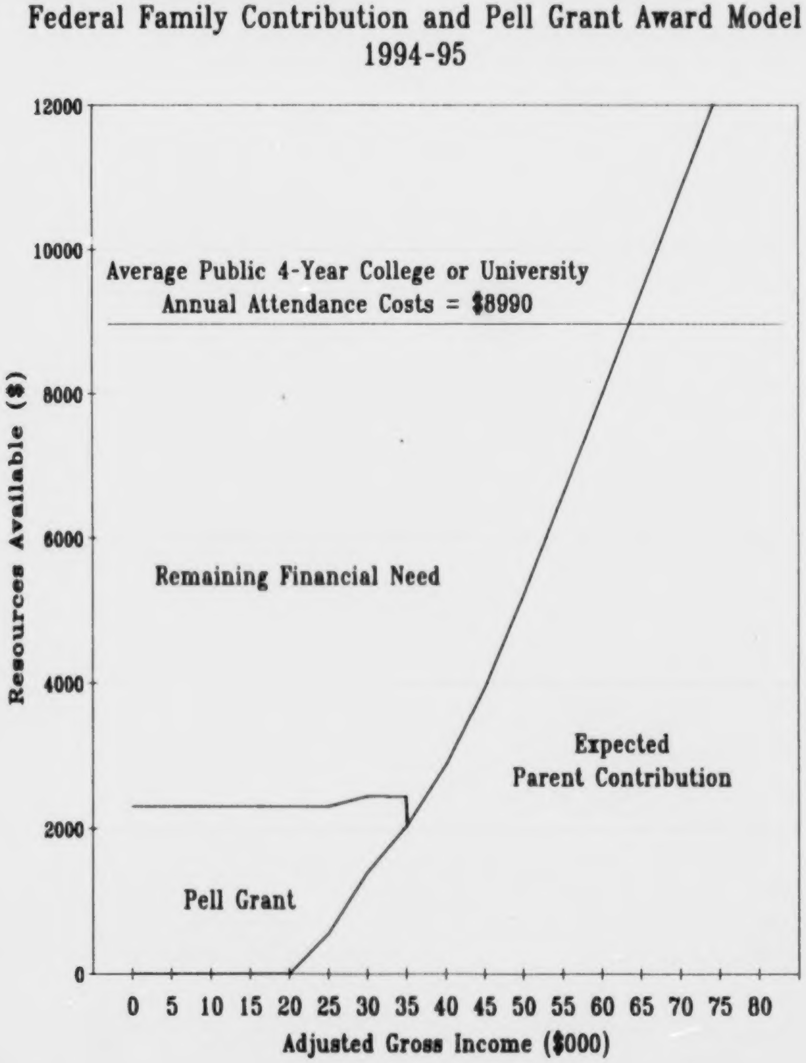
The foundation of student financial aid . . . . . . in serious trouble

Pell Grant Program Participation

The federal Pell Grant program is the mother of all student grant programs. In the current 1996-97 academic year--based on estimated data--about 3.6 million postsecondary undergraduate students will receive about $5.7 billion in non-repayable grant assistance, an average of $1579 for each recipient. One undergraduate student out of every four enrolled in higher education will receive a Pell Grant to help finance a part of their college attendance costs.

But the Pell Grant program is in profoundly serious trouble. In an environment where college students are reporting greater concern about their ability to finance their college educations, Pell Grant program:

- *expenditures peaked in 1992-93 and have declined by 7 percent through 1996-97,*
- *eligible applications have declined by 11 percent, and*
- *recipients have declined by 9 percent.*



The contrasts and contradictions reflected in the Pell Grant program extend to participation rates. Overall Pell Grant program participation rates are the highest they have ever been among college students. In 1994-95--the most recent year of complete state data--the proportion of undergraduate college students receiving Pell Grants ranged from 11 percent in Nevada to 89 percent of those in Puerto Rico.

The problem is clear: a greater share of college undergraduates are receiving Pell Grants that cover a declining share of the costs of college attendance faced by students.

In this analysis, we update our previous reports on the Pell Grant program. Recently released data on the 1994-95 award year permit updating useful state data on where the Pell Grant program has come from and where it is headed, and how the program serves students in public, private non-profit and private for-profit postsecondary institutions in the states.

The Pell Grant Program

The Pell Grant program was created by Congress in the 1972 Education Amendments to the Higher Education Act of 1965. It became operational for the 1973-74 academic year. It was targeted on the neediest undergraduate students in postsecondary education (public and private colleges and universities plus proprietary institutions).

Since its inception, but particularly beginning with the Middle Income Student Assistance Act in 1978, Congress has expanded benefits for students without providing additional funding to cover the expanded benefits. As a result the program has been diluted for those lowest income students for whom it was first created.

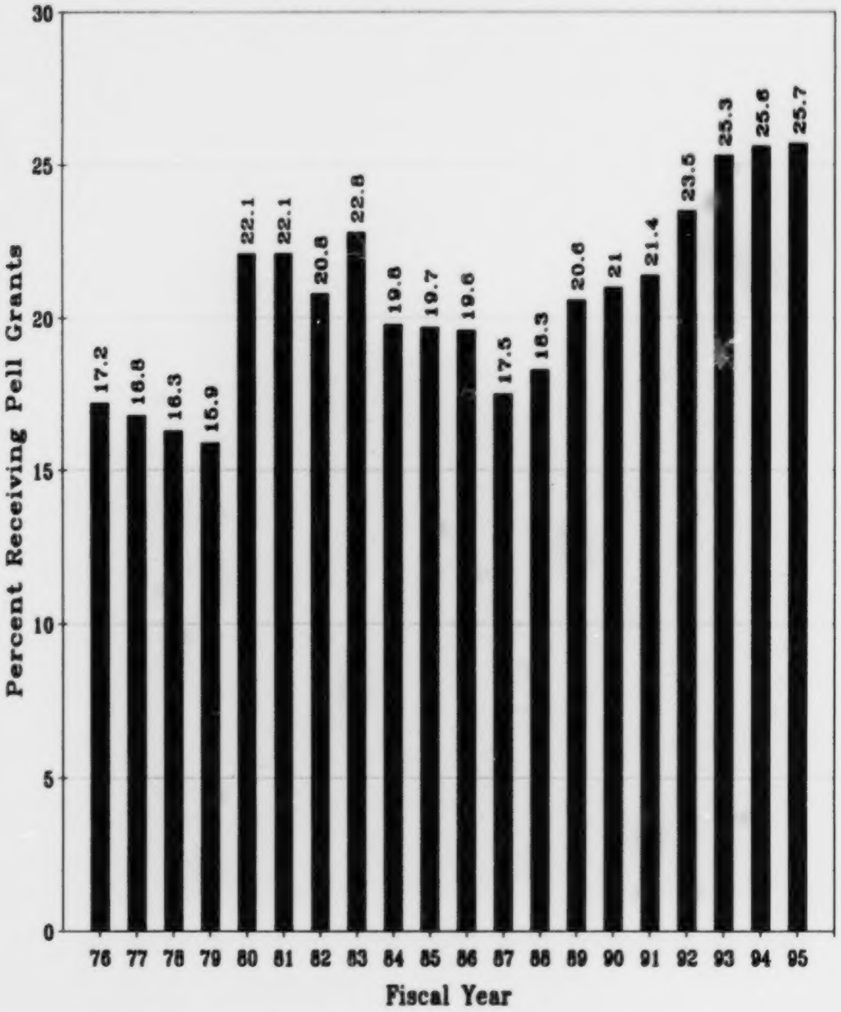
Pell grants are non-repayable, unlike student loans, and form the foundation of the financial aid package received by the lowest income students. The basic formula for determining financial need is:

College attendance costs
- Expected family contribution
= Financial need

College attendance costs include tuition, fees, books, supplies, room, board, transportation, and personal and medical care, usually for 9 months of academic study. The expected family contribution is determined through a formula known as the Federal Methodology which assesses parents' and student's income and assets. If the expected family contribution falls short of meeting college attendance costs, the student has financial need. The federal Pell Grant is the first financial aid provided to help students from low income family backgrounds finance their college attendance costs.

In the chart, the average annual costs of attending a public 4-year college or university for 1994-95 were $8990 according to an annual survey conducted by The College Board. From this is first deducted an expected parental contribution from income (based on a family of 4 with 1 in college) as calculated by the Federal Methodology using ABLE-2 software provided by the New York State Higher Education Assistance Agency. What is left is financial need.

Higher Education Undergraduates Receiving Pell Grants
1975-76 to 1994-95



This chart shows how the Pell Grant started to fill in students' financial need at different levels of family income. Up to $21,000 of family income, need equaled attendance costs because under the Federal Methodology parental income was too low to provide any resources for the student. These students received the maximum Pell Grant of $2300 toward their $8990 college attendance costs.

From about $21,000 of family income up to $36,000, the student's family demonstrated some ability to pay for college, but could not provide all of the resources for a year of college and the Pell Grant provided less than the maximum grant, down to a minimum grant of $400. From $36,000 of family income up to about $65,000, the student still demonstrated financial need but no longer qualified for a federal Pell Grant.

Above about $65,000 of family income, the expected parental contribution from income exceeded annual costs of attendance and these students are not judged financially

Pell Grant Program Summary Statistics

FFY1974 to FFY1995

Award Year	Applications			Elgbl Apps	Recipients				Formula	Maximum Grant		Min Grant	Cost Cap	Funding Level
	Official (000)	Valid (000)	Eligible (000)		Number (000)	Expend (000,000)	Mean	Indep (percent)		Authrizd	Funded			
73-74	512.9	482.3	268.4	F	176.0	$47.6	$270	13.3%	Pell	$1,400	$452	$50	50%	StepRed
74-75	1,304.9	1,114.1	681.6	FS	567.0	358.4	628	21.9	Pell	1,400	1,050	50	50	StepRed
75-76	2,339.3	2,178.7	1,455.2	FSJ	1,217.0	926.0	761	29.8	Pell	1,400	1,400	200	50	Full
76-77	3,590.4	3,408.7	2,258.0	Ug	1,944.0	1,475.4	759	38.3	Pell	1,400	1,400	200	50	Full
77-78	3,844.0	3,621.6	2,390.3	Ug	2,011.0	1,524.3	758	38.5	Pell	1,800	1,400	200	50	Full
78-79	3,885.4	3,401.4	2,228.6	Ug	1,893.0	1,540.9	814	36.7	Pell	1,800	1,600	50	50	StepRed
79-80	4,186.7	3,868.4	3,029.7	Ug	2,537.9	2,357.2	929	33.8	Pell	1,800	1,800	200	50	Full
80-81	4,825.4	4,475.8	3,330.5	Ug	2,707.9	2,387.1	882	40.6	Pell	1,800	1,750	150	50	$50Flat
81-82	4,945.8	4,614.6	3,398.2	Ug	2,709.1	2,300.0	849	41.9	Pell	1,900	1,670	120	50	$80Flat
82-83	5,118.6	4,709.2	3,341.4	Ug	2,522.7	2,420.5	959	45.9	Pell	2,100	1,800	50	50	StepRed
83-84	5,453.5	4,955.8	3,541.2	Ug	2,758.9	2,797.1	1,014	47.5	Pell	2,300	1,800	200	50	Full
84-85	5,514.0	4,981.4	3,558.4	Ug	2,747.1	3,053.0	1,111	48.6	Pell	2,500	1,900	200	50	Full
85-86	5,627.1	5,205.5	3,710.9	Ug	2,813.5	3,597.4	1,279	50.4	Pell	2,600	2,100	200	60	Full
86-87	6,028.3	5,535.7	3,769.6	Ug	2,659.5	3,460.0	1,301	53.9	Pell	2,600	2,100	100	60	LnrRed
87-88	6,297.6	5,714.2	3,812.8	Ug	2,881.5	3,754.3	1,303	57.5	Pell	2,300	2,100	200	60	Full
88-89	6,519.3	5,913.2	4,199.3	Ug	3,198.3	4,475.7	1,399	57.9	Pell	2,500	2,200	200	60	Full
89-90	6,778.0	6,165.3	4,347.7	Ug	3,322.2	4,777.8	1,438	59.0	Pell	2,700	2,300	200	60	Full
90-91	7,138.9	6,455.1	4,508.0	Ug	3,404.8	4,935.2	1,449	61.1	Pell	2,900	2,300	100	60	LnrRed
91-92	7,775.2	6,983.6	4,941.0	Ug	3,786.2	5,792.7	1,530	61.5	Pell	3,100	2,400	200	60	Full
92-93	8,248.1	7,365.2	5,243.1	Ug	4,002.0	6,175.9	1,543	62.1	Pell	3,100	2,400	200	60	Full
93-94	8,770.4	8,518.7	5,382.7	Ug	3,755.7	5,654.5	1,506	59.2	FM	3,700	2,300	400	100	Full
94-95	8,969.6	7,777.2	4,902.3	Ug	3,675.0	5,519.5	1,502	59.3	FM	3,900	2,300	400	100	Full
95-96		7,920.9	4,738.7	Ug	3,600.0	5,425.0	1,507	58.5	FM	4,100	2,340	400	100	Full
96-97		8,129.3	4,777.6	Ug	3,633.0	5,737.0	1,579	55.1	FM	4,300	2,470	400	100	Full
97-98		8,380.2	4,935.9	Ug						4,500				

Notes and sources:

Most of these data are updated and published annually in the Department of Education's *Pell Grant End of Year Report*.

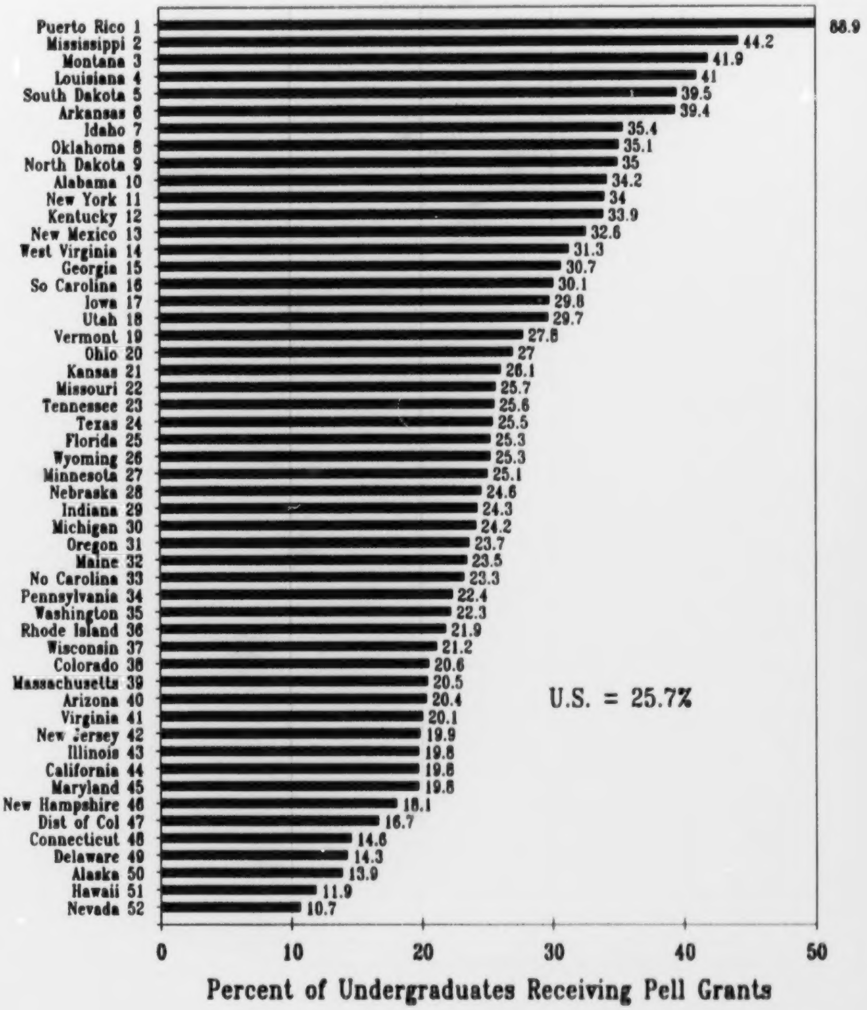
needy for need-based student aid purposes.

Circumstances alter this basic picture. For example, if more than one family member is enrolled in college at the same time, students would demonstrate financial need at higher levels of family income than those shown here. Also, if a student attends a more or less costly college then there would be more or less financial need. Other circumstances also influence the picture described above.

Participation by State

Since the mid 1970s, the proportion of undergraduates in colleges and universities receiving Pell Grants to help finance their higher educations has ranged from 15.9 percent in 1978-79 (the year before the Middle Income Student Assistance Act became effective) to a peak of 25.7 percent in 1994-95, the most recent year of complete program data. It is this expansion of Pell Grant coverage absent equivalent funding increases that has so diluted the effective purchasing power of the Pell Grant maximum award described later in this analysis.

(In this analysis we do not include Pell Grants received by students enrolled in private for-profit educational businesses in each state. In some states these numbers are large, such as in **California, New York, Puerto Rico, Texas, Pennsylvania, Ohio** and **Arizona**. Our reason for excluding this data in this analysis is only because we do not have enrollment data by state for these businesses, and therefore we cannot calculate Pell Grant program participation rates for this sector of postsecondary education.)


Pell Grant Program Participation by State
1994-95

The Pell Grant program operates under identical rules in every state. Nevertheless, the proportion of undergraduate students participating in the Pell Grant program varies widely between the states. In 1994-95 across the states, the Pell Grant program participation rate ranged from less than 11 percent to more than 44 percent, and reached 88.9 percent in **Puerto Rico**, where residents are also eligible to participate.

Between 1987-88 and 1994-95, the proportion of undergraduates in colleges that had received Pell Grants to help finance their college attendance costs increased by 7.3 percent, from 18.4 to 25.7 percent. As is usually the case, this increase was not uniform across all states. In fact the Pell Grant program participation rates decreased in some states.

Pell Grant program participation increased in 44 states during this period. **Georgia** led the increase in Pell Grant program participation among the states. In FY1988 18.3 percent of its undergraduate college students received Pell Grants. By FY1995 the rate had increased to 30.7

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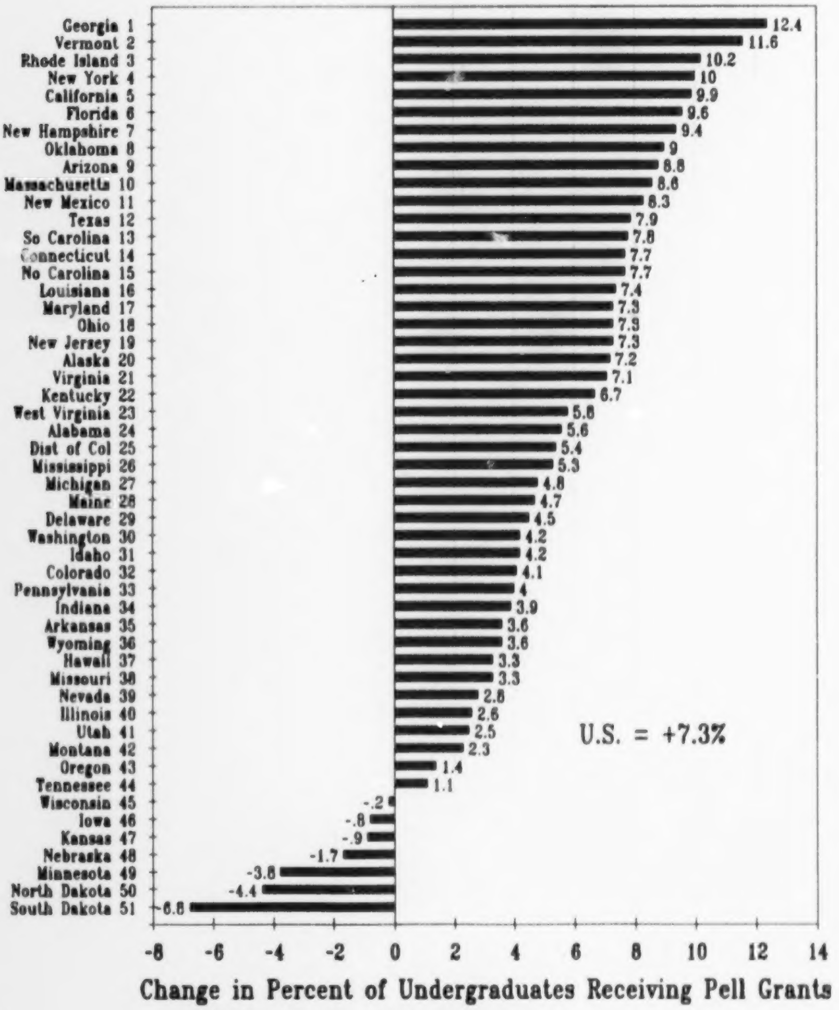
percent. The increase in the participation *rate* increased the number of Pell Grant recipients enrolled in Georgia colleges from 48,200 to 80,800, and brought an additional $49 million in federal Pell Grant monies into Georgia colleges and universities.

Other states with large increases in Pell Grant program participation between 1987-88 and 1994-95 were:

- **Vermont**'s Pell participation rate increased from 16.2 to 27.8 percent. The rate increase added 3500 Pell Grant recipients and added $5.3 more federal Pell Grant dollars to Vermont colleges and universities in 1994-95.
- **Rhode Island**'s participation rate increased from 11.7 to 21.9 percent. The rate increased added 6600 additional Pell recipients and brought an additional $9.9 million in federal Pell Grant monies to the states colleges and universities.
- **New York**'s participation rate increased from 24.0 to 34.0 percent between FY1988 and FY1995. This rate increased added 85,800 Pell Grant recipients and brought an additional $129 million to the state's colleges and universities.
- **California**'s Pell participation rate more than doubled from 9.9 to 19.8 percent. This rate increased added 161,000 Pell Grant recipients in FY1995, and brought an additional $242 million in FY1995 to the state's colleges and universities.

Change in Pell Grant Program Participation by State, 1987-88 to 1994-95

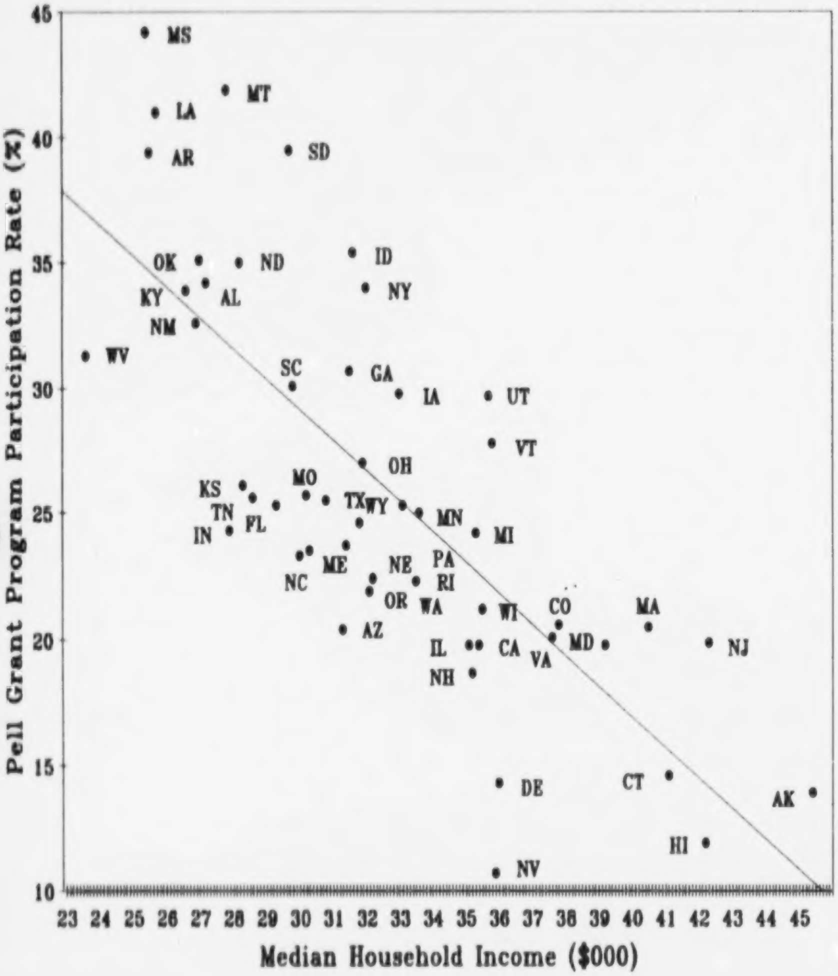


At the other extreme, the Pell Grant program participation rate *declined* in 7 states. All of these states are located in the upper Midwest. While the cause of the decline is beyond the scope of this analysis (resolution of farm crisis?), we can measure the fiscal loss to the colleges and universities in these states.

- **South Dakota**'s Pell Grant program participation rate declined, from 46.3 to 39.5 percent. This rate decline means that 2300 fewer students were receiving Pell Grants and this reduced federal funds for its colleges and universities by $3.4 million in FY1995.
- **North Dakota**'s rate declined from 39.4 to 35.0 percent. This decline meant the loss of about 1600 Pell Grants in FY1995 with a value of about $2.5 million to its colleges and universities.
- **Minnesota**'s rate declined from 28.9 to 25.1 percent. This converts to a loss of 9,600 Pell Grants with a value of about $14.4 million to its institutions.
- **Nebraska**'s rate declined from 26.3 to 24.6 percent. This represents a loss of 1700 Pell Grants with a value of $2.6 million.

The wide variation and changes over time in the proportion of undergraduate college students receiving Pell Grants is a direct reflection of very large differences between the states in characteristics

Pell Grant Program Participation Rate
as a Function of Median Household Income by State
1994-95



important to Pell Grant eligibility. The uniform application of the national standards of the Pell Grant program cause differences between states on Pell Grant program participation rates. They also cause shifts with states over time as the need for federal Pell Grants changes with changing economic circumstances within the states.

We have explored this issue through a modest correlation analysis between Pell Grant program participation rates and state economic characteristics more or less related to Pell Grant program eligibility criteria. We have chosen three state economic measures for 1994 for this analysis:

- Median household income,
- Per capita personal income, and
- Poverty rate.

State median household income correlates best with Pell Grant program participation rates. In FY1995 the correlation was -0.76. In FY1994 this correlation was -0.78. The chart on this page reflects these data and includes a linear regression line through the data points. While median household income rather crudely explains capacity to pay for higher education without Pell Grants, it does help illustrate that a relationship is evident. Those states whose plot falls above the regression line have higher Pell Grant program participation than is indicated by median household income alone. The states whose plots fall below the regression line have Pell Grant program participation rates below what is indicated by median household income alone.

Per capita personal income correlated with Pell Grant program participation rates at -0.71 in FY1995. In FY1994 this correlation had been -0.77.

The states' poverty rates correlated with Pell Grant program participation rates at 0.55 in FY1995. The year before the correlation had been 0.64.

Quite likely these correlations could be improved if several were included simultaneously. This would introduce additional correlation problems well beyond the scope of this study. Despite such difficulties, such an exercise could identify states that appear to be performing better than average in fostering higher educational opportunity, which states are performing below average on behalf of their citizens, and what state interventions work best to foster higher educational opportunity for those from low income family backgrounds.

Pell Grant Maximum Award

Since its inception, the Pell Grant program has been designed to assist students from the lowest family income backgrounds to finance their postsecondary educations. Unfortunately, while it was *designed* for this purpose, it has not been *funded* for this purpose since the end of the 1970s. As a result, the purchasing power of the Pell Grant maximum award has lost more than half of its purchasing power since the end of the 1970s.

For this analysis we have divided the Pell Grant maximum award (see page 10) available to those from lowest family income backgrounds by average institutional charges in public and private 4-year colleges and universities for each year since the beginning of the program. Institutional charges include tuition, fees, room and board. Not included in institutional charges are other college attendance costs normally budgeted for in student financial aid, including books, supplies, transportation, personal and medical care.

Results of this analysis are shown in the chart on this page. For low family income students in average cost public 4-year colleges and universities, the Pell Grant maximum award covered between 70 and 80 percent of institutional charges between FY1976 and FY1979. Since FY1979 the maximum award has steadily lost purchasing power relative to institutional charges. From 77.4 percent in FY1979, it dropped to 54.4 percent by FY1985, to 43.9 percent by FY1990, and 34.5 percent by FY1995. For FY1997--the current academic year--the maximum award will cover an estimated 33.2 percent of institutional charges in average cost public 4-year colleges and universities.

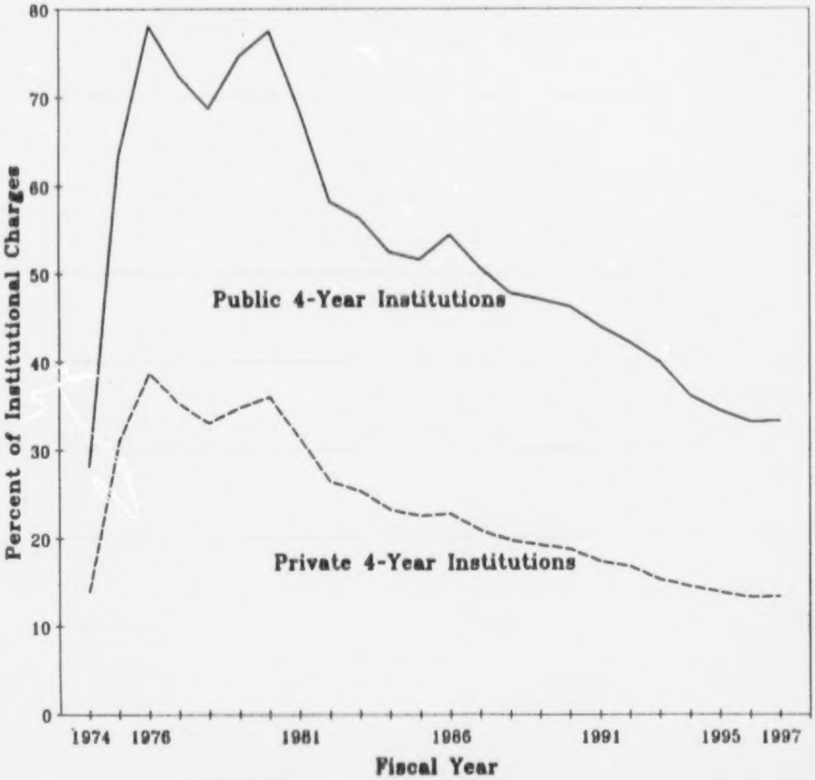
For the current academic year--1996-97--the Pell Grant maximum award is $2470. If this year the Pell Grant maximum award covered the same share of institutional charges that it covered in FY1980, then it would be $5760. Thus, today's maximum Pell Grant buys just 43 percent of what it bought in 1979-80.

This chart illustrates similar loss of purchasing power for the Pell Grant maximum award in average cost private 4-year colleges and universities. In 1979-80 the maximum grant covered 35.9 percent of institutional charges. By 1996-97 it covers about 13.3 percent. To restore the purchasing power of the maximum Pell Grant to 1979-80 levels would require a maximum grant of $6660. Currently the maximum Pell award buys 37 percent of what it did at the end of the 1970s for students in private higher education.

With respect to its original mission of providing substantial grant assistance to students from low income family backgrounds, the Pell Grant program is a pale image of the program developed and funded during the 1970s. The erosion of purchasing power of the maximum award has forced some students from low income families to forgo or delay college, enroll in a second or third choice institution that costs less, prolong their educations by working and attending part-time, and dropping-out in the face of seemingly insurmountable educational debt.

Nevertheless, the Pell Grant program still functions well to provide and shift grants to truly financially needy students wherever and whenever they choose to pursue postsecondary education. That is why undergraduates in different states participate at different rates. That is also why resources shift between states, as the needs of students shift. Even in its current emaciated condition, the Pell Grant program still serves to help equalize opportunity for postsecondary education and training.

Proportion of Institutional Charges
Covered by Pell Grant Maximum Award
FY1974 to FY1997



Clinton's Tuition Tax Breaks: Bad Tax Policy, Worse Education Policy

by
Lawrence E. Gladieux
Executive Director for Policy Analysis, The College Board
Robert D. Reischauer
Senior Fellow in Economic Studies, Brookings Institution,
former Director, Congressional Budget Office

More than any other president since Lyndon Johnson, Bill Clinton has linked his presidency to strengthening and broadening American education. The President has argued persuasively that the nation needs to increase its investment in education to spur economic growth, expand opportunity and reduce growing income disparities. He has certainly earned the right to try to make education work for him as an issue in his reelection campaign, and that's clearly what he plans to do.

Unfortunately, one way the President has chosen to pursue his goals for education is by competing with the GOP on tax cuts. The centerpiece of his education agenda--tax breaks for families paying college tuition--would be bad tax policy and worse education policy. While tuition tax relief may be wildly popular with voters and leave Republicans speechless, it won't achieve the President's worthy objectives for education, won't help those most in need, and will create more problems than it solves.

Under the President's plan, families could choose to deduct up to $10,000 in tuition from their taxable income or take a tax credit (a direct offset against federal income tax) of $1,500 for the first year of undergraduate education or training. The credit would be available for a second year if the student maintains a B average. The vast majority of taxpayers who incur tuition expenses--joint filers with incomes up to $100,000 and single filers up to $70,000--would be eligible for these tax breaks. But before the nation invests the $43 billion that the administration says this plan will cost over the next six years, the public should demand that policy makers answer these questions:

Will tuition tax credits and deductions boost postsecondary enrollment? Not significantly. Most of the benefits would go to families of students who would have attended college anyway. For them, it will be a windfall. That won't lift the country's net investment in education or widen opportunities for higher education. For families who don't have quite enough to send their child to college, the tax relief may come too late to make a difference. While those families could adjust their payroll withholding, most won't. Thus any relief would be realized in year-end tax refunds, long after families needed the money to pay the tuition.

Will they help moderate- and low-income students who have the most difficulty meeting tuition costs? A tax deduction would be of no use to those without taxable income. On the other hand, the proposed $1,500 tax credit--because it would be "refundable"--would benefit even students and families that owe no taxes. But nearly 4 million low-income students would be largely excluded from the tax credit because they now receive Pell Grants which, under the Clinton plan, would be subtracted from their tax-credit eligibility.

Will the plan lead to greater federal intrusion into higher education? The Internal Revenue Service would have to certify the amount of tuition students actually paid, the size of their Pell Grants and whether they maintained B averages. This could impose complex regulatory burdens on universities and further complicate the tax code. It's no wonder the Treasury Department has long resisted proposals for tuition tax breaks.

Will the program encourage still higher tuition levels and more grade inflation? While the tuition spiral may be moderating slightly, college price increases have averaged more than twice the rate of inflation during the 1990s. With the vast majority of students receiving tax relief, colleges might have less incentive to hold down their tuition increases. Grades, which have been rising almost as rapidly as tuition, might get an extra boost too if professors hesitate to deny their students the B needed to renew the tax credit.

If more than $40 billion in new resources really can be found to expand access to higher education, is this the best way to invest it? A far better alternative to tuition tax schemes is need-based student financial aid. The existing aid programs, imperfect as they may be, are a much more effective way to equalize educational opportunity and increase enrollment rates. Over $40 billion could go a long way to restoring the purchasing power of Pell Grants and other proven programs, whose benefits inflation has eroded by as much as 50 percent during the last 15 years. Unlike tuition tax cuts, expanded need-based aid would not drag the IRS into the process of delivering educational benefits. Need-based aid also is less likely to increase inflationary pressure on college prices because such aid goes to only a portion of the college-going population.

Economists have long argued that the tax code shouldn't be used if the same objective could be met through a direct-expenditure program. Tax incentives for college savings might make sense; parents seem to need more encouragement to put money away for their children's education. But tax relief for current tuition expenditures fails the test.

Maybe Clinton's tuition tax-relief plan, like the Republican across-the-board tax-cut proposals, can be chalked up to election-year pandering that will be forgotten after November. But some campaign themes, repeated often enough, make it into the policy stream. That was the case in 1992 when candidate Clinton dwelled on ideas that, as President, he has since turned into constructive initiatives: student loan reform and community service. If reelected, President Clinton again may stick with his campaign mantra. This time, it's tuition tax breaks. This time, he shouldn't.

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The Mortenson Research Seminar on Public Policy Analysis of Opportunity for Postsecondary Education

Number 52 **Iowa City, Iowa** **October 1996**

Exercising the franchise . . .

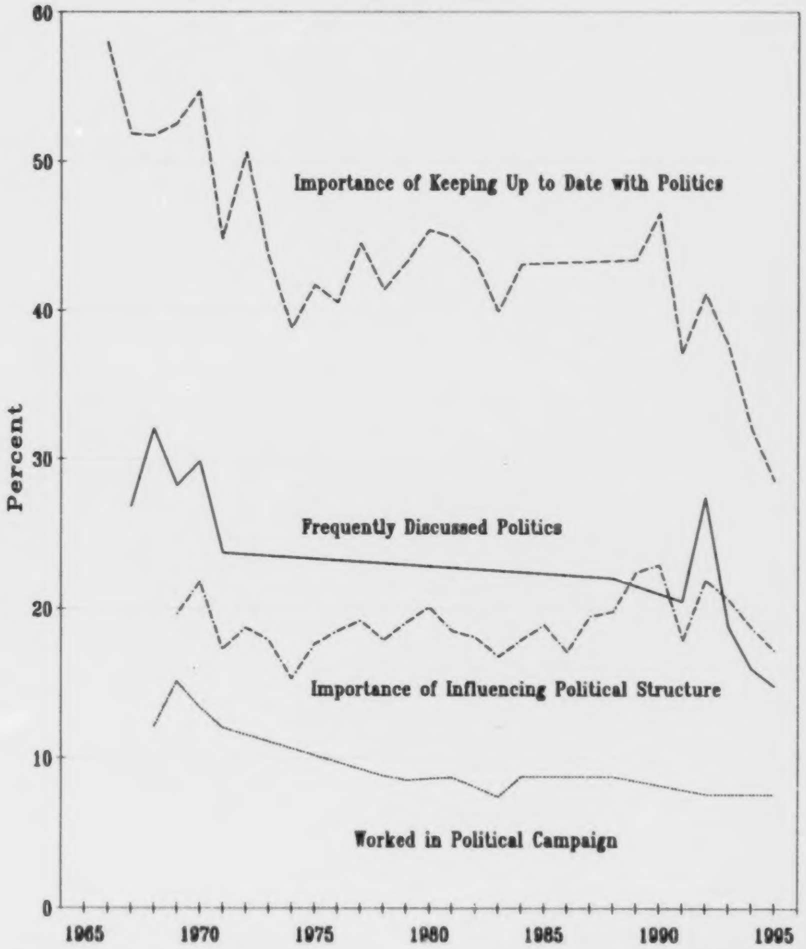
Political Engagement of College Students 1966 to 1995

In the minds of Thomas Jefferson and other founding fathers of these United States, education was essential to the functioning of a governmental system that represented the wishes of its citizens. Their republican vision was of a state in which the supreme power resided in the body of citizens entitled to vote, and was exercised by their elected representatives. Truly representative government was based on informed public opinion, and that opinion was created by a literate citizenry and a free press.

Moreover, the educational system envisioned by Jefferson to support this political system consisted of lower schools to provide literacy for the entire population, and upper schools to develop a natural aristocracy to supply its leadership. Merit scholarships would be provided to assure that not only those economically privileged would have access to the educational opportunities that would supply political leadership.

Jefferson believed that ignorant citizens could not make rational and responsible decisions about complex public issues and policies. He also believed that people were not equal in their abilities to conduct complex governmental affairs, but that all whose abilities were up to the task should have the educational opportunities to develop their talents regardless of their economic circumstances.

Interest in Politics of College Freshmen
1966 to 1995



Universal public education was not achieved until long after Jefferson's times, but he did father the University of Virginia.

Here we examine the political engagement of American college students from several perspectives. What we find is both troubling and reassuring. For example:

- Among 18 to 24 years olds, college students are far more likely to vote in presidential elections than are those who are not enrolled in college.
- The proportion of 18 to 24 year old college students voting in the 1992 presidential election was greater than the proportions voting in the 1988 and 1984 elections.
- The differences in voting rates by educational attainment remain great throughout adult life. The college-educated are more likely to vote than those without college educations.

However, across several measures, college freshmen report declining interest in political processes:

- The proportion of college freshmen reporting that it is essential or very important to keep up to date with politics has declined from 58 percent in 1966 to 29 percent by 1995.
- The proportion of freshmen who frequently discuss politics has declined from 32 percent in 1968 to 15 percent by 1995.
- The proportion of freshmen who report that they have worked in a political campaign has declined from 15 percent in 1969 to 8 percent by 1995.

Freshman interest in such issues varied sharply across colleges and universities differentiated by control, type and academic selectivity in 1995. Freshmen in the most academically selective institutions--both public and private--report the greatest interest in as well as activity in political processes while those in least selective institutions express least interest. Across all measures of interest and activity, public 2-year college freshmen were least politically engaged. This finding suggests that Jefferson's insights about natural ability and political leadership remain valid more than 200 years after they were first conceived.

The Data

Here we explore data on the political engagement of college students collected from college freshmen by UCLA in the annual survey of American college freshmen, and by the Census Bureau in the Current Population Survey.

The data on the attitudes and values of college freshmen are taken from the annual survey of American college freshmen conducted by UCLA.

Sax, L. J., Astin, A. W., Korn, W. S., and Mahoney, K. M. (1995). *The American Freshman: National Norms for Fall 1995.* Los Angeles: Higher Education Research Institute, UCLA.

Dey, E. L., Astin, A. W., and Korn, W. S. (1991). *The American Freshman: Twenty-Five Year Trends.* Los Angeles: Higher Education Research Institute, UCLA.

This report (or the 1996 survey report that will become available about January), may be purchased for $26.79 by calling the Higher Education Research Institute at UCLA at (310) 825-1925.

Data on reported voting of college students in presidential elections is collected by the Census Bureau in the Current Population Survey.

Jennings, J. T. (1993). *Voting and Registration in the Election of November 1992.* Current Population Reports, P20-466. Washington, DC: U.S. Government Printing Office.

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Mission Statement

This research letter is founded on two fundamental beliefs. First, sound public social policy requires accurate, current, independent, and focused information on the human condition. Second, education is essential to the development of human potential and resources for both private and public benefit. Therefore, the purpose of this research letter is to inform those who formulate, fund, and administer public policy and programs about the condition of and influences that affect postsecondary education opportunity for all Americans.

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Reported Voting in the 1992 Presidential Election

At the time of the 1992 presidential election, there were 8,051,000 18 to 24 year olds enrolled in college. Of these, 5,469,000 (67.9 percent) were reported as registered and eligible to vote, and 4,614,000 (57.3 percent) reportedly voted. If we exclude the 571,000 18 to 24 year old college students who were not U.S. citizens, the reported registration rate rises to 73.1 percent and the reported voting rate rises to 61.7 percent.

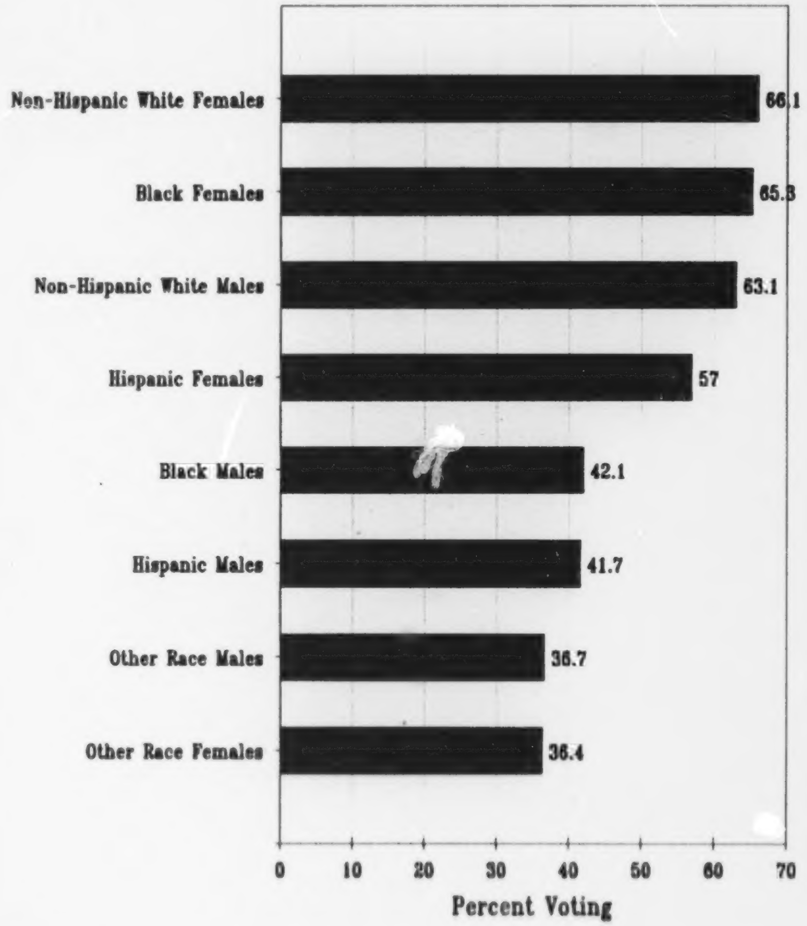
While our analysis of voting of college students is based on these data, it is important to note certain discrepancies in reported voting behavior. In the November 1992 Current Population Survey, the Census Bureau counted 113.9 million voters. The Committee for the Study of the American Electorate counted 104.4 million votes cast in the November 1992 election. This difference of 9.5 million votes is larger than can be accounted for by sampling variability and has been found in prior elections as well.

The sources of the discrepancy are several but one in particular could affect the accuracy of the registration and voting counts for college students. The Current Population Survey is a household survey and relies on the reported voting behavior of all household members, including those who are enrolled in college and living away from home. Thus, the reports of parents in the CPS household survey may not accurately affect the actual voting behavior of their children living away at college. Despite this possible and unmeasured source of discrepancy, our report is based on the CPS data and the limitation is noted in our use of the term "reported".

Among all 18 to 24 year olds, the reported voting rates among U.S. citizens by school enrollment in the 1992 presidential elections were as follows:

In high school	35.9%
In college, full-time	60.9%
In college, part-time	66.6%
Not enrolled	39.8%

Reported Voting Rates of U.S. Citizen College Students 18 to 24 Years by Gender and Race/Ethnicity 1992 Presidential Election



We have reaggregated the published Census Bureau voting rate data from the 1992 presidential election to derive voting rates for U.S. citizens by race/ethnicity and gender. The published racial/ethnic categories are: total, white, black and Hispanic, where Hispanics may be of any race. Our derived and non-overlapping racial/ethnic categories are:

Non-Hispanic white
Black
Hispanic
Other race (mainly Asian, but including Native Americans)

By these racial/ethnic categories, reported voting rates for college students in the 1992 presidential election were:

Non-Hispanic white	64.7%
Black	55.7%
Hispanic	50.3%
Other race	36.6%

The chart on the prior page shows reported voting rates for college students in the 1992 presidential election in our derived racial/ethnic categories. The reported voting rates ranged from 36.4 percent for other race (Asian) females to 66.1 percent for non-Hispanic white females.

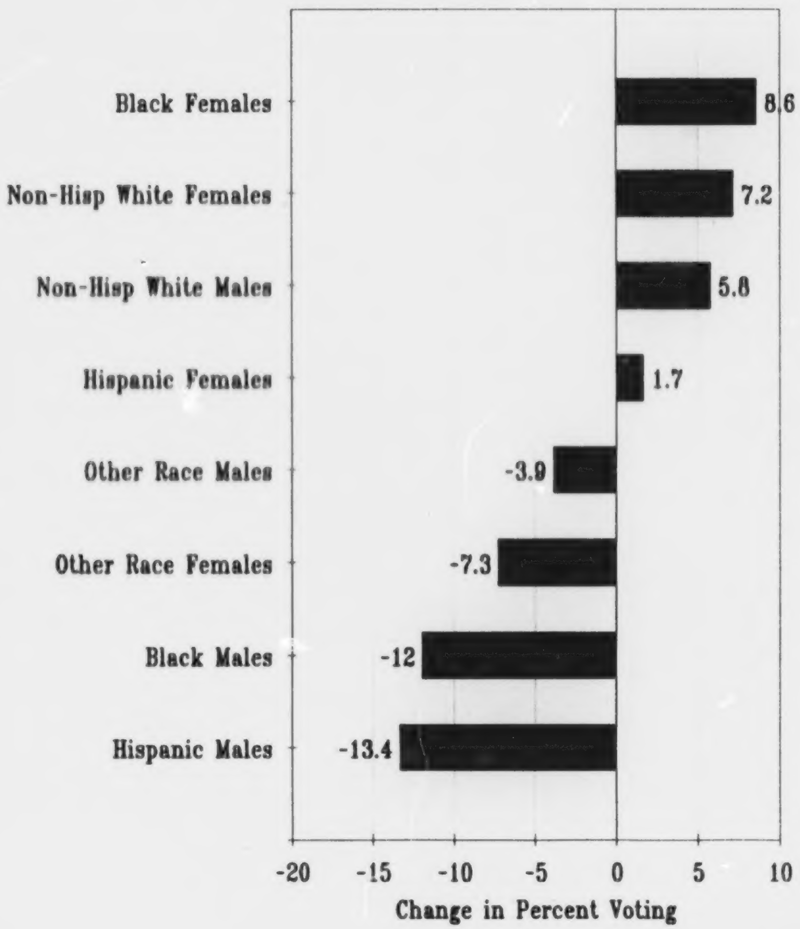
For each and every racial/ethnic category, the reported voting rate for females exceeded the rate for males. Across all groups, the voting rate for females was 64.3 percent, compared to 58.8 percent for males--a difference of 5.5 percent. By racial/ethnic categories, the gender differences are particularly striking among blacks and Hispanics:

Non-Hispanic white	+3.0%
Black	+23.2%
Hispanic	+15.3%
Other race	+0.3%

Change in Reported Voting between the 1984 and 1992 Elections

The Census Bureau has reported registration and voting behavior of college students for the 1984, 1988 and 1992 presidential elections. The reported voting rates for college students who were U.S. citizens in these three elections were 57.3, 50.4 and 61.7 percent respectively.

Change in Reported Voting Rates of U.S. Citizen College Students 18 to 24 by Gender and Race/Ethnicity 1984 to 1992 Presidential Elections



This indicates that between the 1984 and 1992 presidential elections, reported voting rates among college students increased. However, this generalization does not apply to each subset of the population of college students. For example, by our racial/ethnic categories, voting rates changed as follows:

Non-Hispanic white	+6.6%
Black	+0.1%
Hispanic	-4.9%
Other race	-5.5%

By gender voting rates changed at different rates between 1984 and 1992 as well. For females the reported voting rate increased by 6.2 percent compared to a 2.3 percent increase for males.

But even these changes do not describe the important gender shifts in reported voting rates within racial/ethnic categories of college students that occurred between 1984 and 1992. For example, among blacks voting rates for females *increased* by 8.6 percent while they *decreased* by 12 percent for males. A similar gender shift occurred among Hispanics. Reported voting rates for Hispanic females increased by 1.7 percent while they decreased by 13.4 percent for Hispanic males. These data are shown in the chart on this page.

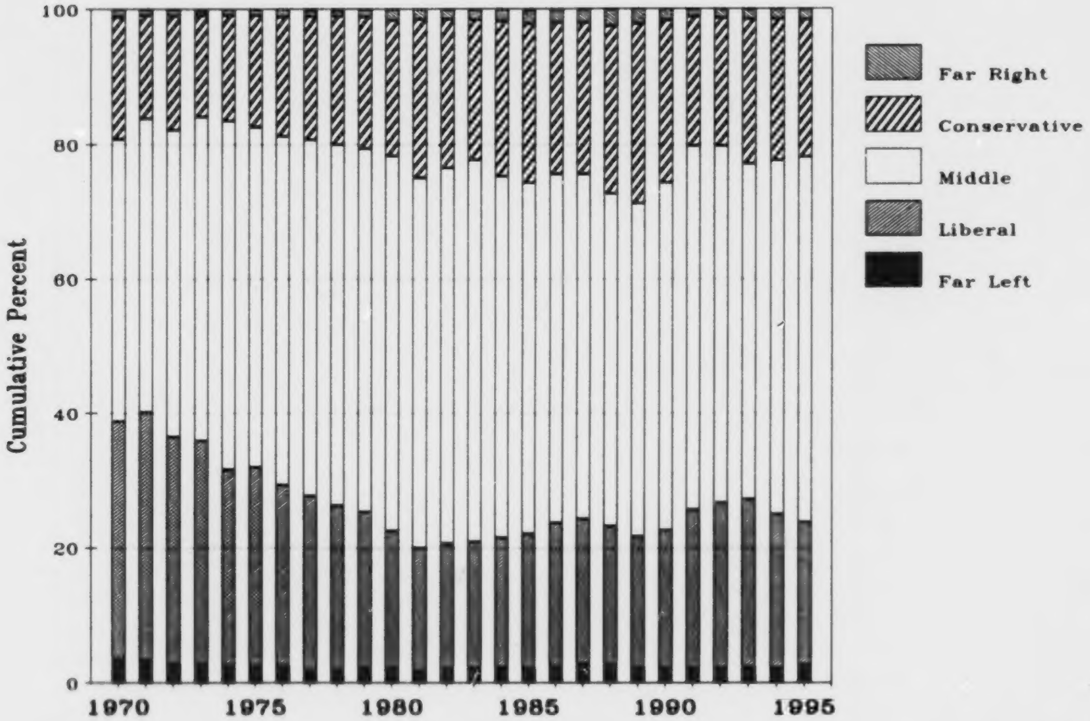
Political Views

The political views of college freshmen were self-reported in the UCLA freshman survey. In 1995 they were:

Far left	2.7%
Liberal	21.1%
Middle of the road	54.3%
Conservative	20.3%
Far right	1.6%

Over the last 26 years of the freshman

Political Views of College Freshmen
1970 to 1995



survey, freshmen have reported shifts both toward the middle and right. These shifts occurred mainly during the 1970s and early 1980s.

- Between 1971 and 1981 the proportion of freshmen reporting far left or liberal political views dropped from 40 to 20 percent.
- Between 1974 and 1989 the proportion of freshmen reporting far right or conservative political views increased from 16 to 29 percent.
- Between 1970 and 1983, the proportion of freshmen reporting middle-of-the-road political views increased from 42 to 57 percent.

Since about 1981 these trends have reversed slightly.

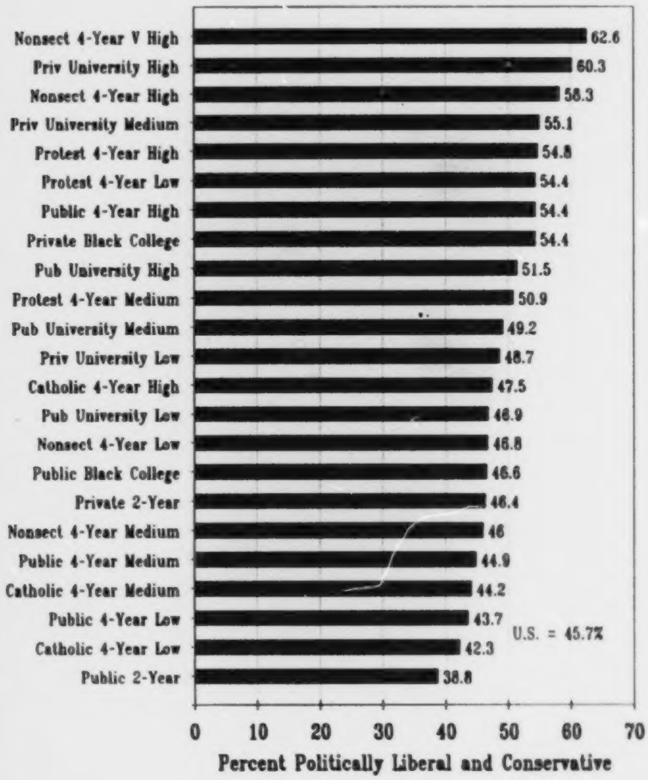
If being middle-of-the-road measures political disengagement, and being liberal or conservative measures political engagement (and subsequent data will indicate that this is the case), then politically engaged college freshmen are more concentrated on some campuses than they are on others.

The chart on the following page shows the proportion of fall 1995 freshmen who report that they are far left, liberal, conservative or far right by institutional control, type and academic selectivity. For all freshmen, 45.7 percent were in one of these four categories--the balance were middle-of-the-road.

However, the proportions varied widely across institutions. At one end of this spectrum, 62.6 percent of the freshmen enrolled in very selective, nonsectarian 4-year colleges reported that they were politically engaged, either liberal or conservative in their views. At the other end of the spectrum, 38.8 percent of community college freshmen reported that they were liberal or conservative.

This chart illustrates several other points. First, the proportion of freshmen who report that they are politically engaged (by being liberal or conservative) appears to be positively correlated with academic selectivity of the institution. That is, institutions with the highest academic admissions standards and which enroll students with highest SAT and ACT test scores also enroll the most politically engaged students. Similarly institutions that are least academically selective in admissions tend to enroll smaller proportions of politically engaged freshmen. From this it is possible to conclude that *students* with the highest SAT and ACT test scores are more often politically engaged than are other students with lower test scores.

Freshmen Who Are Politically Liberal and Conservative by Institutional Control, Type and Academic Selectivity
1995

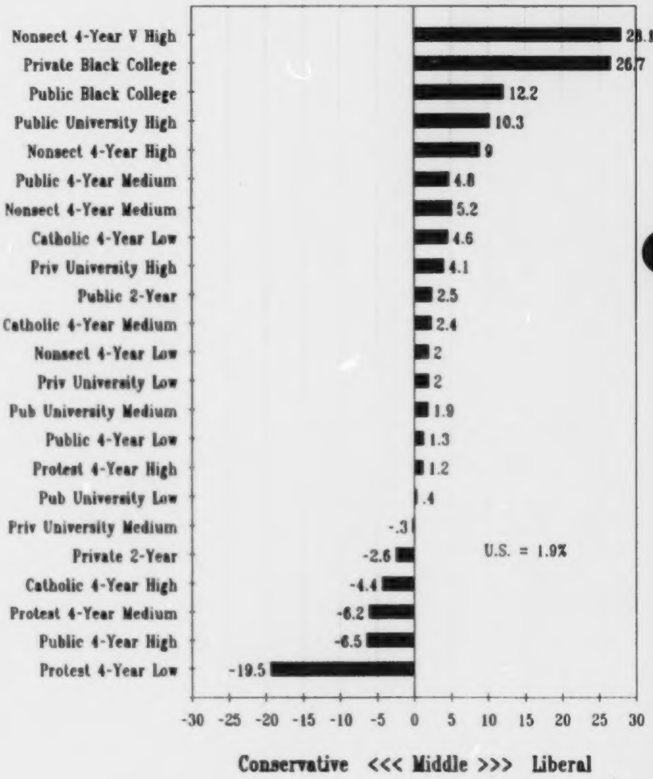


Other weaker correlations suggested by this chart are that private institutions may enroll more politically engaged freshmen than do public institutions, that universities and colleges enroll more such freshmen than do 2-year institutions, and that Catholic 4-year colleges attract a smaller share of politically engaged freshmen than do nonsectarian and protestant 4-year colleges. But for any of these types of institutions, substantial numbers of politically engaged and disengaged freshmen are to be found.

By campus, the freshmen survey data also indicate the liberal or conservative tilt among those who identify themselves with a liberal or conservative view. Here our measure of political tilt is by campus and is calculated by subtracting the proportion of freshmen who identify their political views as far right or conservative from the proportion of freshmen who identify themselves as far left or liberal.

For the 1995 class of college freshmen there were 1.9 percent more who identified themselves as liberal. This proportion varied widely by campus, as is usually the case. As shown in the following chart, the hotbeds of political liberalism are in very highly selective nonsectarian 4 year colleges and private black colleges. In addition, institutions with more liberals than conservatives include public black colleges, highly selective public universities, and highly selective nonsectarian 4-year colleges. The main hotbed of political conservatism is at Protestant 4-year colleges with low academic selectivity. Other institutions where conservatives outnumber liberals are highly selective public 4-year colleges and protestant 4-year colleges practicing medium academic selectivity.

Liberal or Conservative Orientation of College Freshmen by Institutional Control, Type and Academic Selectivity
1995

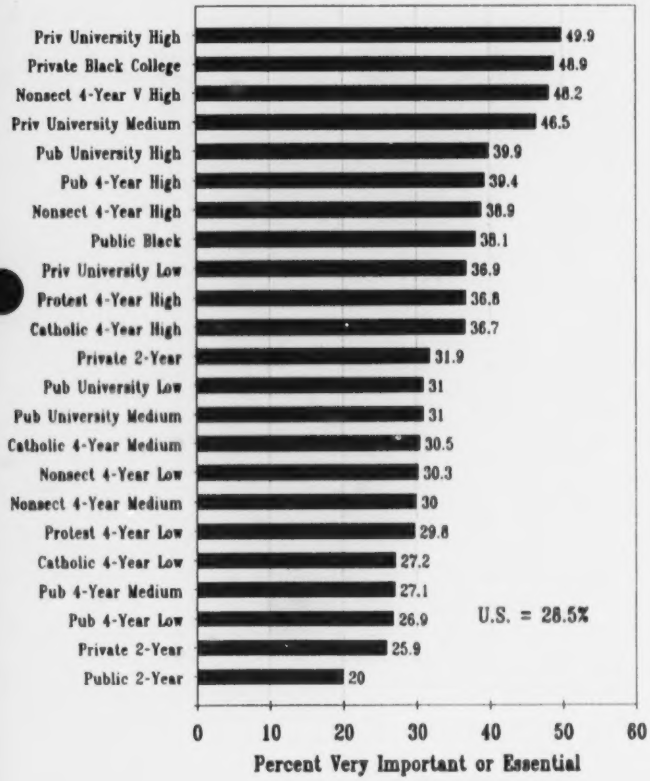


Interest in Politics

The chart on the first page of this issue of **OPPORTUNITY** summarizes several political interests of American college freshmen over the last three decades. On each of these four interests, the political engagement of college freshmen has declined over time. Some of these declines are quite staggering. Each is analyzed in more detail below.

Importance of keeping up to date with politics. This question has been asked on the freshman survey almost continuously since the inception of the survey in 1966. The first year of the survey, 58 percent of college freshmen reported that it was very important or essential to them to keep up to date with politics. By 1995 this had dropped by half to 28.5 percent--the lowest proportion of freshmen reporting this level of importance in the history of the survey. Most of this decline occurred in the late 1960s and early 1970s, and again in the 1990s.

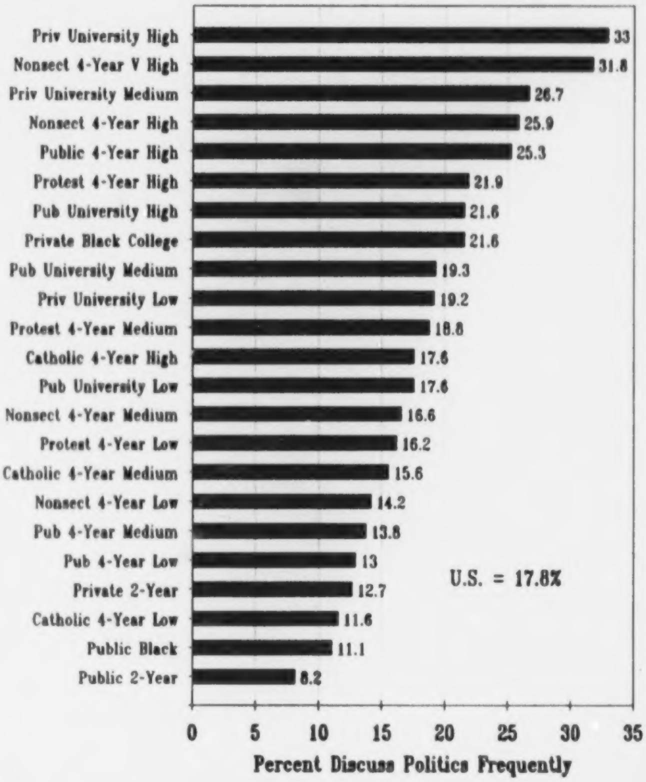
Importance of Keeping Up to Date with Politics
by Institutional Control, Type and Academic Selectivity
1995



Across different institutions, the proportion of 1995 freshmen reporting that keeping up to date with politics was very important or essential to them varied widely, as shown in the chart on this page. The range was from 20 percent of the freshmen at public 2-year colleges to 50 percent of the freshmen at highly selective private universities. The pattern is clear: keeping up to date with politics is far more important to freshmen attending highly selective institutions than it is to freshmen attending least selective or open admission institutions. Also, a large proportion of freshmen at black colleges--both public and private--attach a high degree of importance to keeping up with politics.

Frequently discussed politics. This question has been asked in the freshman survey mainly in the 1960s and early 1970s, then beginning again in the late 1980s. In 1967 when it was first asked 27 percent of freshmen reported that they frequently discussed politics and in 1968 this rose to 32 percent. By 1995, however, the proportion of freshmen thus reporting had fallen to 14.8 percent, the lowest on record. This decline appears to have been particularly sharp between 1992 and 1995. About 18 percent of freshmen males reported that they discussed politics frequently, compared to about 12 percent for females in the 1995 freshman survey.

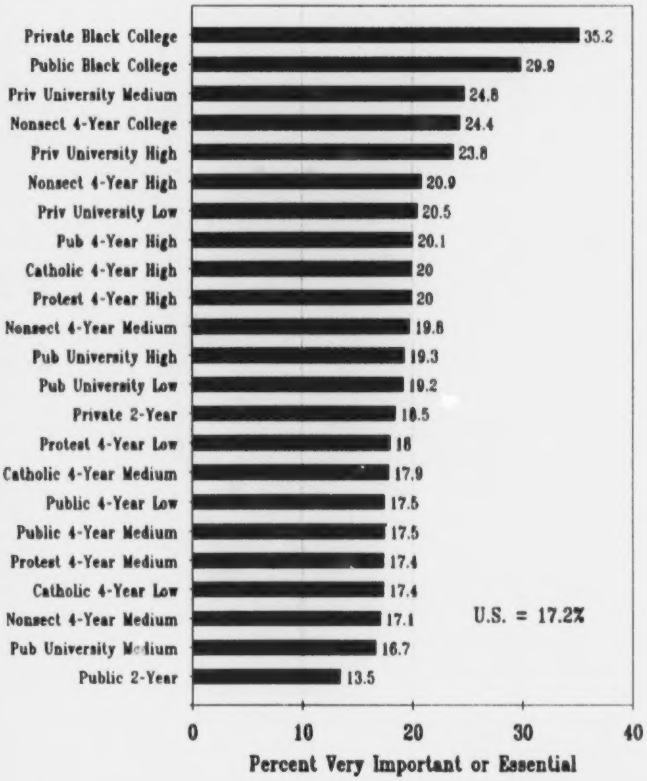
College Freshmen Who Frequently Discuss Politics
by Institutional Control, Type and Academic Selectivity
1995



Across institutions there was wide variation in the proportions of freshmen reporting that they frequently discussed politics. Freshmen in highly selective private universities were about 4 times more likely to report this than were freshmen in public 2-year colleges. The previous pattern of the most academically selective institutions reporting the greatest proportion of their freshmen frequently engaged in political discussions hold here also.

Influence the political structure. This question has been asked in each freshman survey since 1969. The responses show some fluctuation but little trend. In 1995 about 17 percent of all freshmen reported that influencing the political structure was important to them, compared to about 20 percent in 1969. In 1995 about 20 percent of the males and 15 percent of the females felt this was important to them.

Importance of Influencing the Political Structure
by Institutional Control, Type and Academic Selectivity
1995

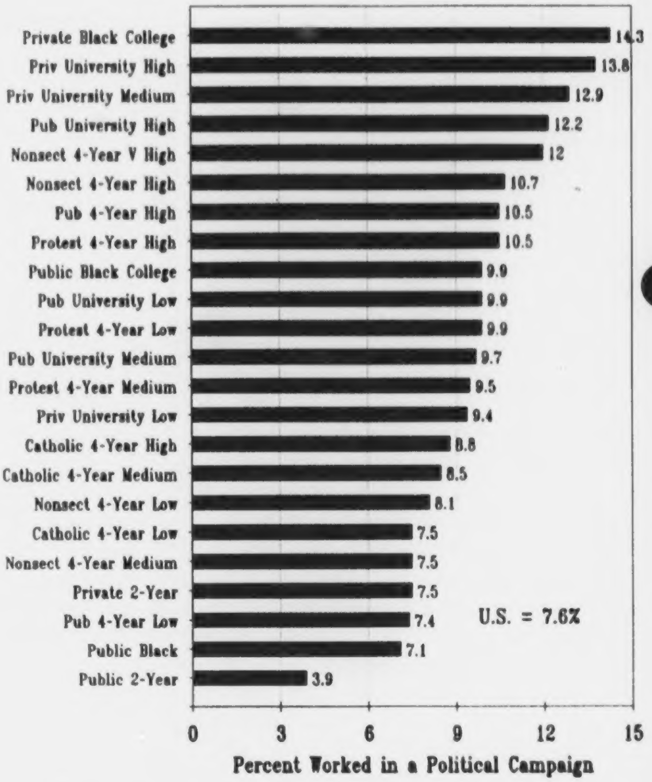


However, the proportion of freshmen enrolled in different types of colleges and universities giving importance to influencing the political structure ranged widely. A larger proportion of freshmen in black colleges--both public and private--reported that this was important to them than freshmen in predominantly white institutions. In 1995 about 35 percent of freshmen in private black colleges reported that this was important to them, compared to about 14 percent of freshmen in public 2-year colleges.

Worked in a political campaign. The freshman survey question about work in a political campaign has been asked sporadically since 1968. In the 1995 freshman survey 7.6 percent of all freshmen reported that they had worked in a political campaign during the past year. This was down from 12.1 percent in 1968 and 15.2 percent in 1969. In 1995 7.4 percent of freshmen women and 7.9 percent of freshmen men reported that they had worked on a political campaign during the previous year.

In 1995 the proportion of freshmen reporting that they had worked in a political campaign ranged from 14 percent at private black colleges to 4 percent in public 2-year colleges. This distribution too appears to be correlated with selectivity.

College Freshmen Who Worked in a Political Campaign
by Institutional Control, Type and Academic Selectivity
1995



These data present a mixed picture of political engagement of college students. Over the last 30 years college freshmen report declining interest in keeping up to date with politics, declining frequency of political discussion, and declining participation in political campaigns. In 1995 political interest was most concentrated among freshmen enrolled in the most academically selective institutions. Political interest was consistently weakest among community college freshmen.

However, college student voting rates increased between 1984 and 1992. We will report what happened in the November 1996 presidential elections when the results become available.

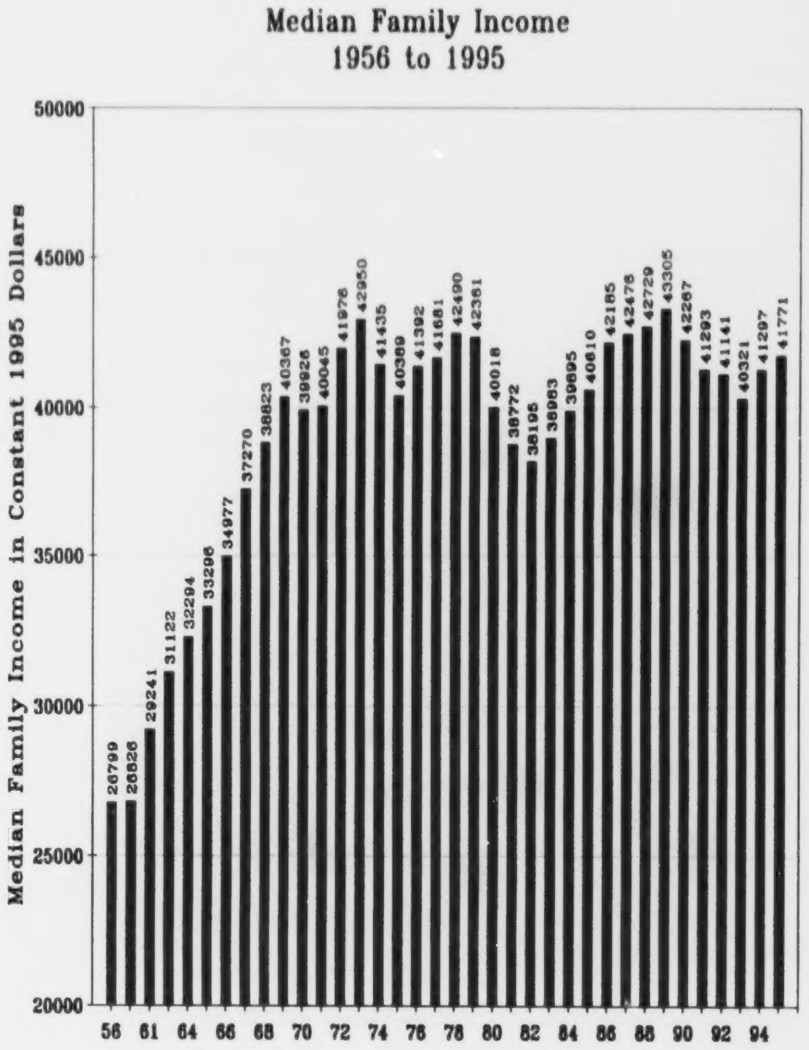
Family Income by Educational Attainment of Householder 1956 to 1995

Family income is our broadest economic measure of the standard of living at which we live our lives. The range of income of American families describes, at one extreme, our struggles for survival where all or nearly all income is devoted to the most basic needs of food and shelter. At the other extreme, only a small portion of income is required for basic survival requirements with most income available for discretionary purposes that enrich the breadth and depth of our lives.

Since 1956 family income has gone through two broad phases. Between 1956 and 1973 median family income grew sharply in real terms from about $27,000 (1995 dollars), to about $43,000. Then between 1973 and 1995 median family income fluctuated within a range of about $38,000 to $43,000. By 1995 real median family income was still 2.7 percent below where it first peaked in 1973, and was about 3.5 percent below its highest level reached in 1989. The recent political trumpeting of the small growth in real household income between 1994 and 1995 for the first time in 6 years is trivial in this broader context of lack of growth in real family income between 1973 and 1995.

The second major finding in these data is the redistribution of family income across families with different levels of educational attainment. While median income for all families has fluctuated within a fairly narrow range since 1973, some families are clearly better off and others worse off in 1995 than they were in the 1970s. The distinction is clearly educational attainment. Those families headed by persons with collegiate education--and the more the better--have generally managed to maintain their living standards. Other families headed by persons with high school educations or less are generally much worse off today than they were in the 1970s.

The most obvious conclusion from these data is that people need ever greater levels of educational attainment simply to keep up with the cost of living. Those who fail to follow this formula have experienced sharply reduced standards of living, and if the past is prologue then their living standards will continue to deteriorate and their lives will be increasingly focused on basic necessities of survival.



The Data

Data on mean and median family income in 1995 used in this analysis were issued in September by the Census Bureau from data collected in the March 1996 Current Population Survey. Data are also available for individuals and for households.

U.S. Bureau of the Census, Current Population Reports, P60-193. ***Money Income in the United States: 1995 (With Separate Data on Valuation of Noncash Benefits).*** U.S. Government Printing Office, Washington, D.C., 1996.

In this report standard Census Bureau definitions are used. *Families* are 2 or more people living together who are related by blood or marriage. *Head of household* refers to the person in whose name the housing unit of the family appears. If more than one person's name as the owner or renter of the housing unit, than either person may be the head of household. *Family income* refers to the combined incomes of both husband and wife. It includes money income before taxes and does not include noncash benefits such as food stamps, medicare, medicaid, public housing and employer-provided fringe benefits. In this analysis family income is limited to those families where the head is 25 years and over.

Data up through 1994 were analyzed and reported in the April 1996 issue of OPPORTUNITY. This report is an update and extension of that analysis and report.

Family Income

In 1995 there were 66,578,000 families in the U.S. Their median family income was $41,771, and mean family income was $52,642.

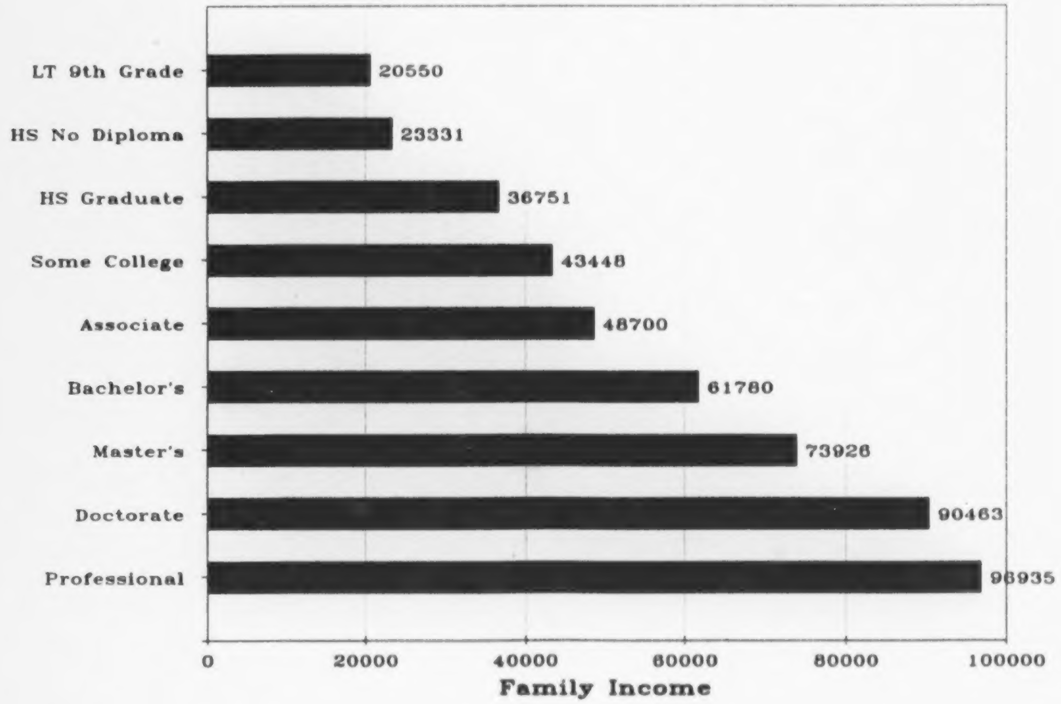
About 17 percent of all families were headed by persons with less than a high school education, 32 percent by persons with a high school diploma, 26 percent with some college or an associate degree, 16 percent by a bachelor's degree, and 9 percent with a post-baccalaureate degree.

Constant (1995) dollar median family income in 1995 fell within a range of $38,195 (1982) to $43,305 (1989) that has persisted since 1968, as shown in the chart on page 9. The very sharp growth in median family income that followed World War II peaked in 1973 and has only fluctuated within this range since then.

Family Income by Educational Attainment

Family income, like the income of individuals of which it is

Median Family Income
by Educational Attainment of Householder
1995



comprised, varies widely across levels of educational attainment of the head of the family. In 1995 mean family income ranged from $25,833 for families headed by persons with less than 9 years of education to $129,959 for families headed by persons with professional degrees from universities. Median incomes ranged from $20,550 for families headed by persons with less than 9 years of education to $96,935 for families headed by persons with professional degrees.

There are many ways to illustrate the relationship between income and educational attainment of the head of the family.

- About 0.9 percent of all families headed by persons with less than 9 years of education had incomes of $100,000 and over, compared to 3.8 percent of those headed by high school graduates, 18.8 percent of those with bachelors degrees, 27.9 percent of those headed by persons with master's degrees, 40.5 percent of those with doctorates, and 47.8 percent of those with professional degrees.
- About 32.8 percent of all families headed by persons with less than 9 years of education have incomes of less than $15,000 per year, compared to 13.0 percent of families headed by high school graduates, and 4.0 percent of families whose head has a bachelor's degree. This drops to 2.6 percent of those families headed by a person with a post baccalaureate degree.

Change in Family Income by Educational Attainment

Although median family income for all families has been stuck in a narrow range for nearly 30 years, there has been a great deal of income redistribution. Particularly since the end of the 1970s, the incomes of families have diverged according to educational attainment.

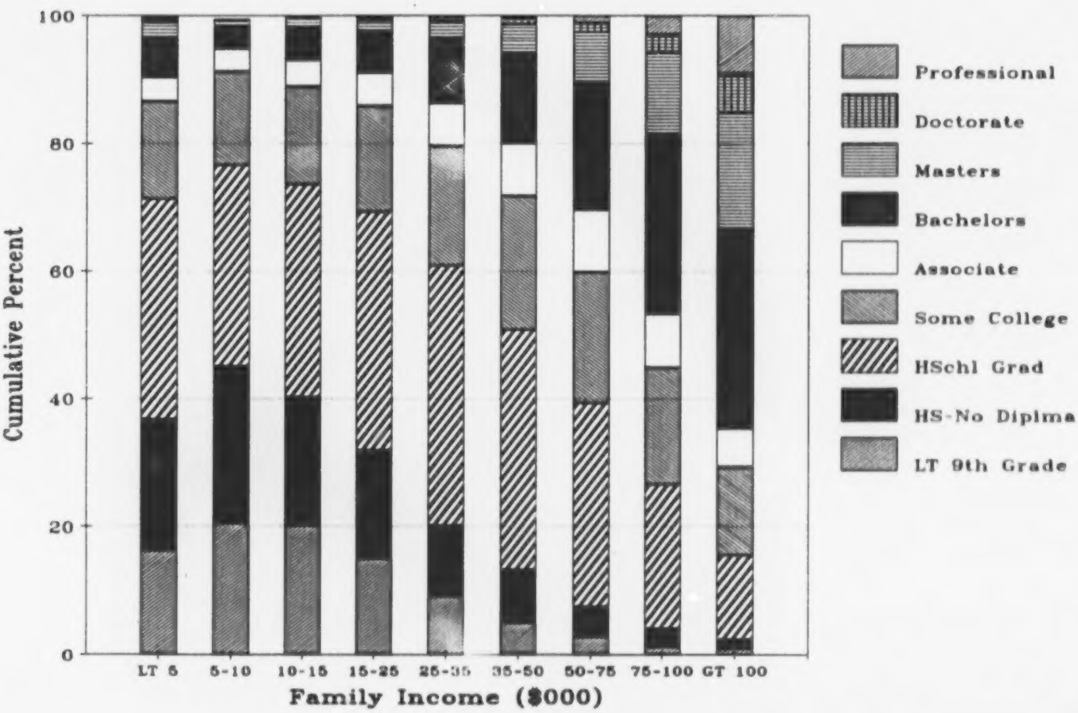
Between 1978 and 1995 real median family income for families headed by individuals with 1 to 3 years of high school *decreased* by nearly 30 percent. During this same period real median incomes of families headed by persons with 5 or more years of college *increased* by nearly 25 percent. This redistribution of family income according to the educational attainment of the family head has been nearly continuous since 1978, although the divergence may have slowed somewhat during the last 2 years.

Discretionary Family Income

The importance of income to living standards may be illustrated by comparing the proportions of total income required to meet basic survival needs compared to the remainder available for discretionary purposes.

Basic survival needs include minimal expenditures for food, shelter, clothing, medical care and other necessities at the

Distribution of Families by Income and by Educational Attainment of Head 1995



barest level to ensure survival. Here we use the weighted average poverty thresholds for a family of four as reported by the Census Bureau.

Above the poverty threshold is discretionary income, or that income which is still available after basic survival needs are met. Discretionary income offers families choices about how to spend it. The choices we make reflect personal preferences about where to live and how large and well furnished our housing unit will be, how much and how expensive our clothing will be, what kind of food we will eat and where we will eat it, when and where we will vacation and how we will get there, how new, how large and how many automobiles we will own, etc. These choices add breadth and quality to the lives of families and thereby improve our living standards.

Discretionary Income as a Percent of Median Family Income by Educational Attainment of Head of Household

	1970	1975	1980	1985	1990	1993	1995
1-3 Years HS	57%	52%	48%	43%	40%	34%	33%
HS Graduate	63%	63%	61%	60%	60%	56%	58%
1-3 Yrs Coll	68%	67%	66%	66%	68%	65%	65%
4 Yrs College	73%	74%	73%	75%	76%	76%	75%
5/+ Yrs Coll	77%	77%	76%	78%	79%	81%	81%

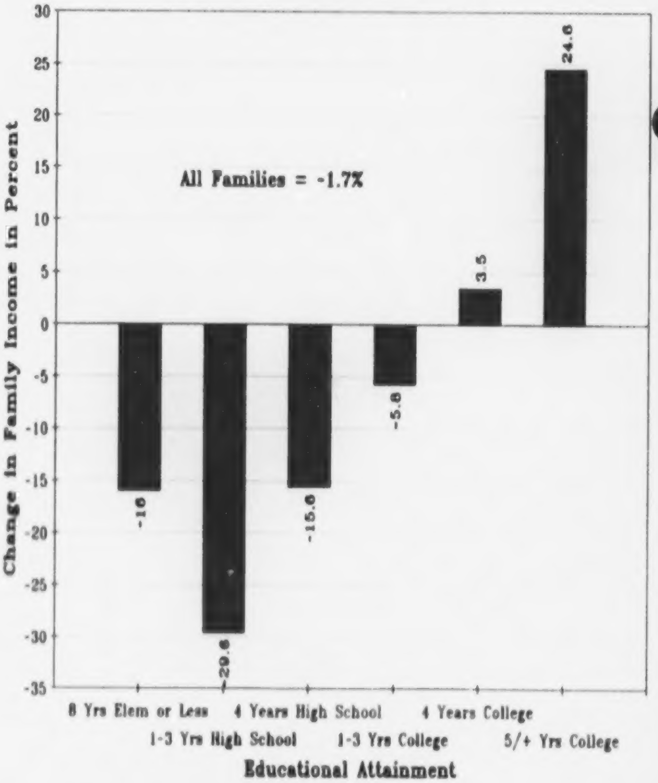
In 1995 discretionary income ranged from 33 percent of median family income for families headed by persons with 1 to 3 years of high school, to 81 percent of median income for families headed by persons with 5 or more years of college. For families headed by high school graduates, discretionary income was 58 percent of the total, and for families headed by college graduates it was 75 percent.

Over the last 25 years, the proportion of family income that is discretionary has dropped most sharply for families headed by person with 1 to 3 years of high school, from 57 to 33 percent. Only among families headed by persons with at least 4 years of college has discretionary income (hence, living standards) increased between 1970 and 1995.

Summary and Conclusions

The 1995 data are consistent with previously reported data on the relationship between educational attainment and family income: more is better. Family income increases sharply with educational attainment of the head of the family. Moreover, the relationship between family income and educational attainment has strengthened, particularly since 1978. Between 1956 and 1978, median income of families headed by high school graduates ranged quite steadily between 67 and 74 percent of those of college graduate headed families. But by 1995 this had sunk to less than 60 percent. For families headed by persons with 5 or more years of college, median incomes were 109 percent of those families headed by persons with 4 years of college. By 1995 their median family incomes were 131 percent of those of families headed by bachelor degree holders. The premium to families with college-educated heads continues to grow in these data.

The strengthening relationship between educational attainment and family income has even clearer effects on the way we measure living standards and quality of life. Families headed by persons with high school educations or less have seen steady and substantial erosion in their discretionary incomes over the last 25 years, or that available after the most basic of survival needs are met. Families headed by persons with four years or more of college have seen their discretionary income grow during this period. The breadth and quality of the lifestyle choices available to these families has expanded, thereby improving their living standards.



Change in Median Family Income
by Educational Attainment of Householder
Between 1978 and 1995

Additional Copies of Poster Available

The poster on Average Family Income by Educational Attainment of Householder, 1995, that is enclosed for subscribers with this issue of OPPORTUNITY is available in quantity. For 5 or more copies, the price of $2.50 each includes shipping charges. Contact OPPORTUNITY.

Financing Student Access to Higher Education In North Carolina

The North Carolina Association of Colleges and Universities recently released an important report on a study of that state's role in financing student access to higher education. The report was authored by Laura Greene Knapp, education research consultant based in Cary, North Carolina, and formerly on the policy research staffs of the Pennsylvania Higher Education Assistance Agency and The College Board. (See how to contact Laura at the end of this article.) Among the major conclusions reached in the study were:

- *North Carolinians benefit from a college education.*
- *North Carolina benefits from an educated population.*
- *Fewer North Carolinians attend college, compared to the remainder of the ten most populous states.*
- *Inadequate financing is a significant barrier to higher education.*
- *Those pursuing higher education are facing increasing financial difficulties.*
- *Federal aid can't be counted on to continue to meet student needs.*

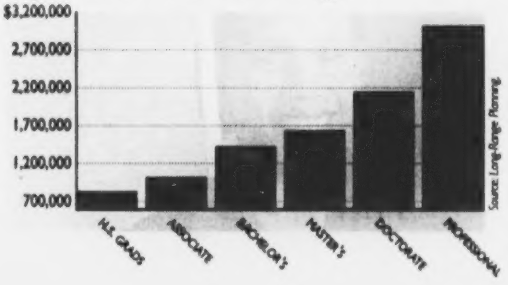
We reproduce here one particularly graphic and forceful section of the NCACU report on the private and social benefits of higher education investments to North Carolina. In the annual budgetary scramble for scarce state resources where higher education has been losing out to corrections and Medicaid for more than 15 years in nearly every state, the importance of such reminders to those who provide state funding must not be overlooked.

BENEFITS OF HIGHER EDUCATION

The benefits of higher education are both private and social. North Carolina's citizens benefit individually from a college education through increased earnings and expanded employment opportunities. North Carolinians benefit collectively from an educated population through a more diverse economy, lower poverty rates, lower unemployment rates, and less crime.

PRIVATE BENEFITS

U.S. Worklife Earnings

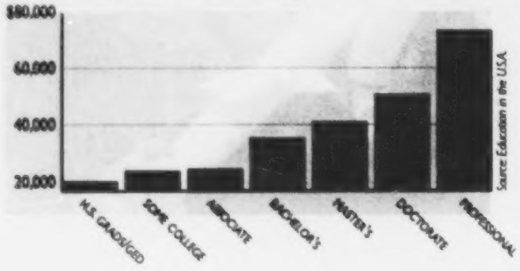


Source: Long-Range Planning

In 1992, estimates of U.S. lifetime earnings by level of educational attainment show that income increases with higher earned degrees. Specifically:

- The estimated worklife earnings of individuals with an associate degree are 29% higher than those with only a high school diploma.
- The estimated worklife earnings of individuals with a bachelor's degree are 73% higher than individuals with only a high school diploma.

NC Annual Earnings & Education



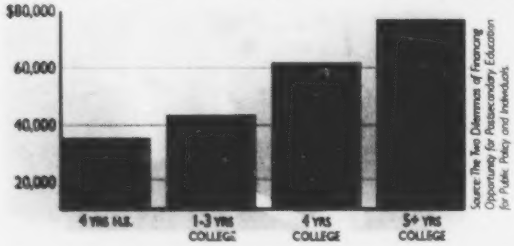
Source: Education in the USA

In 1989, annual earnings of North Carolinians also increased based on the level of education achieved. Specifically:

- The mean annual earnings of individuals with an associate degree are 24% higher than those with only a high school diploma.
- The mean annual earnings of individuals with a bachelor's degree are 78% higher than individuals with only a high school diploma.

Note: Earnings are for civilians 18 and over who worked year-round full-time in North Carolina.

U.S. Median Family Income by Education

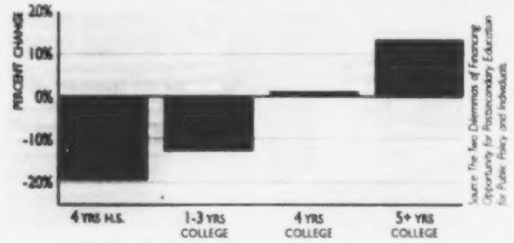


Source: The Two Dilemmas of Financing Opportunity for Postsecondary Education for Public Policy and Individuals

The 1994 median U.S. family income rises progressively as the householder's education level increases. Specifically:

- The median family income of families whose household head has attended four years of college is 77% higher than the median family income of families whose household head has only attended four years of high school.

Median Family Income Changes by Education, 1973 to 1994

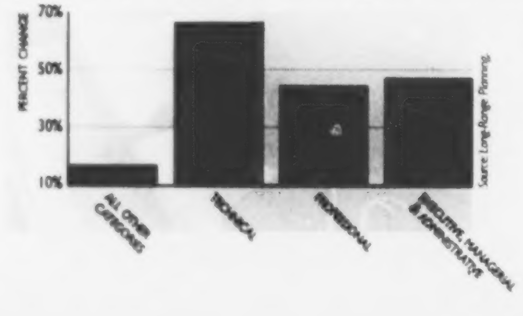


Source: The Two Dilemmas of Financing Opportunity for Postsecondary Education for Public Policy and Individuals

Between 1973 and 1994, families whose household head attended less than four years of college experienced real income losses while those families whose household head attended college five or more years experienced real income gains. Specifically:

- Families whose householder attended five or more years of college earned $77,851 on average in 1994, up almost 14% from their 1973 earnings of $68,486 in constant 1994 dollars.
- Families whose householder attended only four years of high school earned $35,275 in 1994, but twenty years ago would have earned $44,019 in constant 1994 dollars. Likewise, families whose householder attended one to three years of college earned $43,025 in 1994, but twenty years ago would have earned $49,243 in constant 1994 dollars.

NC Employment Changes, 1980 to 1990

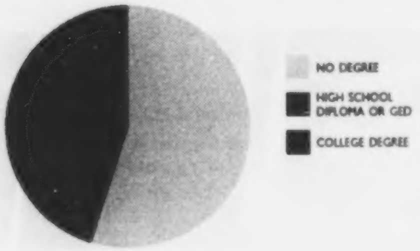


Source: Long-Range Planning

Between 1980 and 1990, employment growth in North Carolina was greatest for managers, professionals and technicians, all of which require education beyond high school.

SOCIAL BENEFITS

North Carolinians Living in Poverty by Education Level

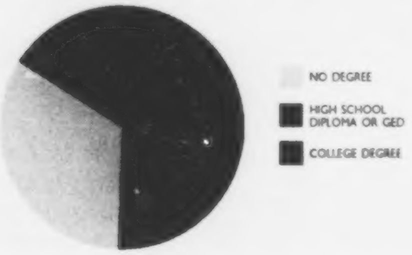


Source: Original analysis of 1990 Census data

In 1990, over half of North Carolinians who were living in poverty had no high school diploma, no GED, and no college degree – poverty equals 150% of the federal poverty level and college degree includes associate, bachelor's, master's, professional, and doctorate degrees. Specifically:

- 242,000 (6%) of North Carolinians age 25 or above were living in poverty.
- Over half of North Carolinians living in poverty, 126,000 individuals, had no high school diploma or GED.
- Over one-third of North Carolinians living in poverty, 91,000 individuals, had a high school diploma or GED.
- Only 10% of North Carolinians living in poverty, 25,000 individuals, had any college degree.
- The higher a person's education level, the less likely they were to be living in poverty. 10% of North Carolinians age 25 or above without a high school diploma or GED were living in poverty in 1990. In contrast, only 5% of North Carolinians with a high school diploma or GED and only 2% of those with any college degree were living in poverty in 1990.

Unemployed North Carolinians by Education Level

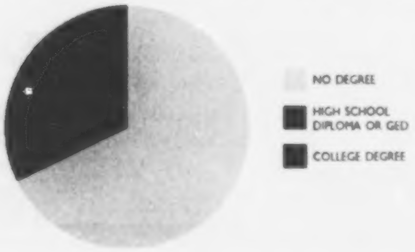


Source: Original analysis of 1990 Census data

Unemployed North Carolinians are much more likely to have a high school diploma, GED or less, than to have a college degree, considering only adults 25 or above who are working or seeking work. Specifically:

- Of the 100,000 unemployed North Carolinians in 1990, 34% had no high school diploma or GED, 51% had a high school diploma or GED, and 16% had a college degree.

North Carolinians on Public Assistance by Education Level



Source: Original analysis of 1990 Census data

In 1990, North Carolina adults age 25 or above on public assistance were significantly more likely not to have a college degree. Specifically:

- Of the 185,000 North Carolina adults age 25 and above receiving public assistance in 1990, 68% have no high school diploma or GED, 27% have a high school diploma or GED, and 5% have a college degree.

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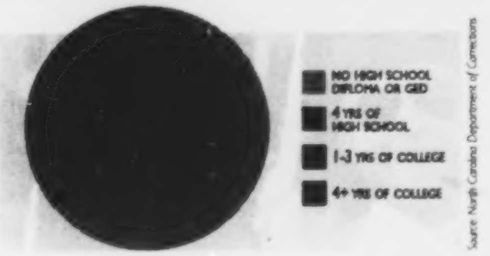
North Carolina Prison Population by Education Level

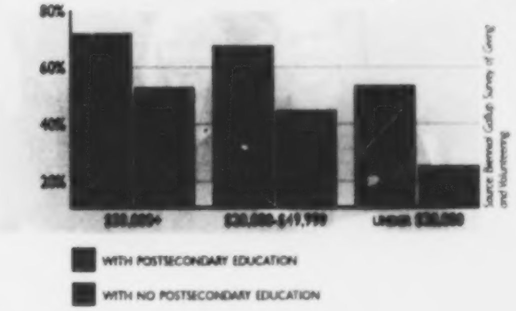


Source: North Carolina Department of Corrections

In 1993-94, based on a total of 22,536 convictions, individuals without a high school diploma or GED were significantly more likely to be incarcerated than individuals with any postsecondary education.

- With an average annual cost to confine an inmate in North Carolina at $23,188, the state annually spends approximately:
  - $334 million to incarcerate inmates who did not complete high school or earn a GED.
  - $146 million to confine inmates who have a high school diploma or GED.
  - $43 million to confine inmates who have attended any postsecondary institution.

% U.S. Volunteers by Education & Income



Source: [illegible] Gallup Survey of Giving and Volunteering

Individuals who attended college are more likely to volunteer than those who did not attend college. Specifically:

- Considering the lowest income group, individuals who earned less than $20,000, those who attended college were twice as likely to volunteer than those who did not go to college.

Copies of the complete report are available from Laura Greene Knapp at (919) 460-0489, or via e-mail: LGKnapp@AOL.COM

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Postsecondary Education OPPORTUNITY

The Mortenson Research Seminar on Public Policy Analysis of Opportunity for Postsecondary Education

Number 53 **Iowa City, Iowa** **November 1996**

Headed for zero . . . . . . by the year 2035?

State Tax Fund Appropriations for Higher Education for FY1997 (and Beyond)

State investment in higher education opportunity continued its long-term downward slide in FY1997 state tax fund appropriations. Despite booming prosperity, governors and legislators again chose to spend tax resources elsewhere. State personal income increased faster than state tax fund appropriations for higher education. The connection between economic growth and state investment in opportunity for higher education for citizens appears to be disappearing across the states.

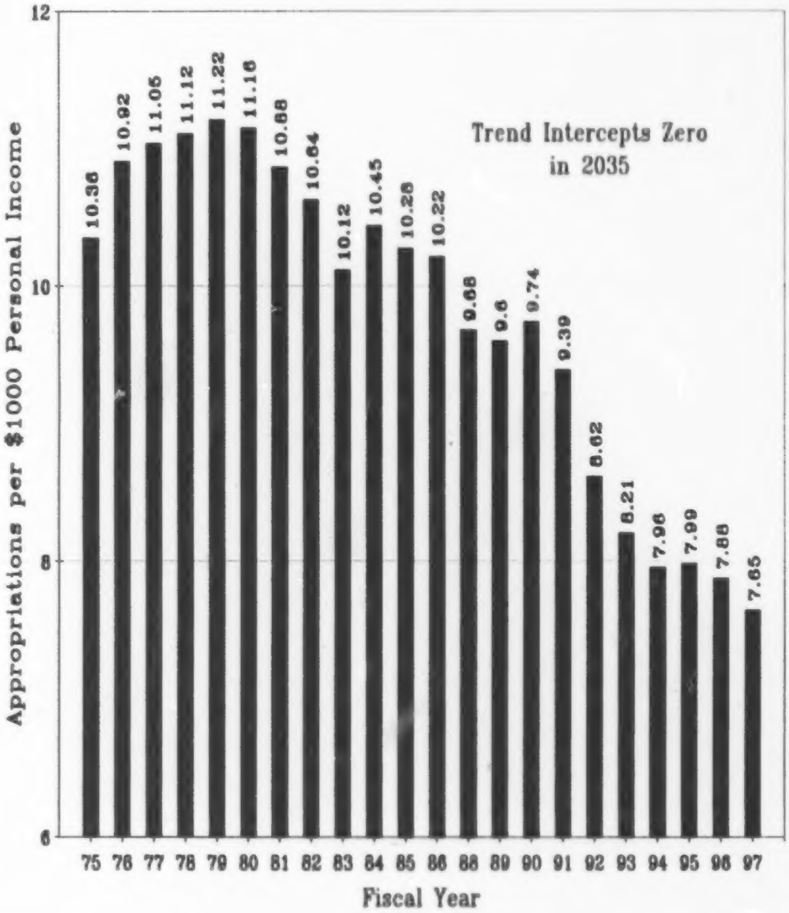
Here we update our annual November analysis of state tax fund appropriations for the operating expenses of higher education. These data are collected by the Center for Higher Education at Illinois State University. Our analysis extends the reported data by adding a control for state personal income, which we take to be each state's tax base for state investment in higher education opportunity for its citizens.

This analysis finds:

- FY1997 state tax fund appropriations for higher education were $7.65 per $1000 of personal income, the lowest for any year since before FY1975 when the data series begins.
- FY1997 appropriations were down from $7.88 in FY1996, and from a peak of $11.22 reached in FY1979.
- Extrapolating the trend in declining state appropriations into the future, aggregate state investment in higher education opportunity will reach zero by the year 2035.

States vary widely in the rate of reduction in state tax fund appropriations for higher education.

Appropriations of State Tax Funds for Operating Expenses of Higher Education per $1000 of Personal Income FY1975 to FY1997



- State tax fund appropriations for higher education will reach zero first in **Vermont** in 2014.
- This will be followed quickly by **California** in 2015, **Rhode Island** in 2016, **New York** in 2019, and **Virginia** in 2021.
- By 2035, 17 states will have zeroed higher education out of state tax fund appropriations.
- By the end of the next century, 39 states will have reached zero.
- Only three states--**Maine, New Jersey** and **New Mexico**--are not on a trend to eliminate state tax funding for higher education.

The privatization of public higher education is well underway in the United States. It is occurring in at least 47 states, and has been proceeding for the last 18 years. The best minds leading higher education during the last two decades have been unable to convince governors and legislators to expand or even preserve social investment in higher educational opportunity for state citizens despite abundant evidence of the importance of higher education to state welfare.

What is there to make of this? For one thing, state governance/oversight needs to be revisited. It makes little sense for governors and legislators to appoint trustees when states provide so little or no financial support for public higher education. Moreover, continued state political regulation of decreasingly state-funded institutions would almost certainly cripple institutional efforts to adapt to market-driven forces shaping the institution's future.

However, our concern here is for opportunity for higher education for citizens. Educational opportunity costs money: to provide capacity, to ensure quality, and to maintain affordability. When higher education is underfunded, one or more of these components of educational opportunity is invariably compromised. There is abundant evidence that all three components have suffered since the end of the 1970s. And as a direct result, higher education's role in preparing students for their and our future has been curtailed.

We are less than we could have been, and we will be less than we are for our failure to make social investments in opportunity for higher education.

This issue of **OPPORTUNITY** is devoted to getting one simple but very important message across:

> *The decline in state investment in higher education opportunity for citizens is real.*

- The decline has been underway since FY1979, for the last 18 years.
- It has occurred under both Republicans and Democrats.
- The decline has persisted in periods of economic expansion and recession.
- The decline has occurred in 47 of the 50 states by one measure, and in all 50 states by another measure.
- The decline is substantial. For FY1997 states appropriated $46.5 billion in state tax funds for higher education. If for FY1997 states had appropriated the FY1979 share of state personal income for higher education, then $67.8 billion would have been appropriated. In effect, states diverted $21.3 billion to other purposes.

The Data

This analysis is based on two sets of data. The first is state tax fund appropriations for higher education. The second is state personal income.

State tax fund appropriations for the operating expenses of higher education were collected by Prof. M. M. Chambers of Illinois State University from 1958 until his death in 1985. His work has been carried on by Prof. Edward Hines of the Center for

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Mission Statement

This research letter is founded on two fundamental beliefs. First, sound public social policy requires accurate, current, independent, and focused information on the human condition. Second, education is essential to the development of human potential and resources for both private and public benefit. Therefore, the purpose of this research letter is to inform those who formulate, fund, and administer public policy and programs about the condition of and influences that affect postsecondary education opportunity for all Americans.

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Higher Education at Illinois State University and his staff.

The data collected in the annual survey are reported in many places, including *The Chronicle of Higher Education* (11/1/96), *Grapevine* (the Center's newsletter), and eventually by the State Higher Education Executive Officers under the title *State Higher Education Appropriations*. The data are also available at the Center's website at:

http://coe.ilstu.edu/grapevine/

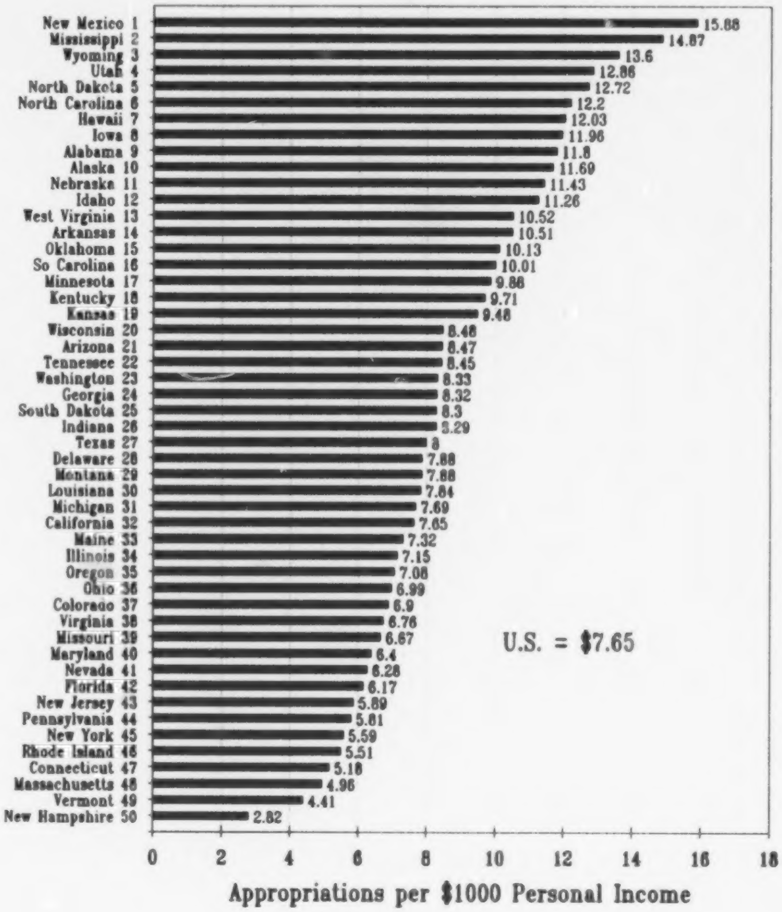
The Illinois State University data are collected under a set of ground rules:

1. Data are appropriations, not actual expenditures.
2. These are for annual operating expenses and do not include appropriations for capital outlays and debt service.
3. Sums included are those for public institutional operations, statewide boards, student financial aid, by other state agencies for higher education programs, and to private higher education institutions.
4. Appropriations do not include revenues from federal sources, student fees, auxiliary enterprises and other non-tax sources.

In addition to the $46.5 billion appropriated by states from state tax funds for higher education, about $3 billion was provided from local tax fund appropriations in FY1996. These funds are not included in the following analysis.

State personal income data are used as a control, to reference state tax fund appropriations to the resources of each state available to finance higher education. For each state, state tax fund appropriations for higher education for FY1997 were divided by CY1995 state personal income. Thus, for FY1997, $7.65 of state tax funds were appropriated for each $1000 of state personal income in CY1995.

Appropriations of State Tax Funds for Operating Expenses of Higher Education per $1000 of Personal Income FY1997



State personal income data for CY1995 were recently published in:

"Comprehensive Revision of State Personal Income, 1969-95." *Survey of Current Business*, October 1996. U.S. Department of Commerce, Bureau of Economic Analysis. Washington, DC: U.S. Government Printing Office.

Features of both data sets deserve comment because they influence our calculations. First the state appropriations data reflect state intent at the beginning of each fiscal year and do not include subsequent mid-year adjustments, up or down, when state revenues change. This was particularly important during periods of economic recession, such as the early 1990s, when projected revenues did not materialize. Likewise, the state personal income data are regularly revised by the Bureau of Economic Analysis on about 5 year intervals.

Appropriations of State Tax Funds for Operating Expenses of Higher Education per $1000 of Personal Income by Fiscal Year

State	1975	1977	1979	1980	1982	1983	1984	1985	1986	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	Change: FY1979 to FY1997 Dollars	Change: FY1979 to FY1997 Percent	Approps Reach Zero in
Alabama	$11.54	$16.03	$18.04	$16.02	$14.31	$12.64	$11.67	$13.73	$15.69	$12.42	$15.65	$14.73	$15.45	$13.02	$12.98	$13.08	$14.19	$12.54	$11.80	$-6.24	-34.6%	2073
Alaska	18.42	19.60	16.64	16.42	23.84	25.91	20.85	20.26	26.98	16.55	17.21	17.59	15.94	15.05	14.49	13.67	12.44	11.93	11.69	$-4.95	-29.7%	2022
Arizona	15.80	15.52	14.60	13.41	12.81	11.83	11.09	11.94	11.96	11.00	11.23	10.91	10.92	10.31	9.74	9.29	9.33	8.94	8.47	$-6.13	-42.0%	2028
Arkansas	10.24	11.76	11.81	13.00	11.05	10.73	9.87	11.93	12.99	10.63	10.42	10.29	10.28	11.49	11.87	10.93	10.80	10.95	10.51	$-1.30	-11.0%	2151
California	12.01	13.10	13.47	14.14	12.82	11.35	8.83	11.42	11.34	10.41	10.17	10.81	10.53	9.14	7.64	6.57	6.95	7.22	7.65	$-5.82	-43.2%	2015
Colorado	13.64	13.60	12.66	11.41	10.53	10.53	9.90	9.57	9.23	8.86	9.25	9.29	8.88	8.40	8.10	7.46	7.10	7.11	6.90	$-5.76	-45.5%	2023
Connecticut	7.40	6.76	8.26	7.68	7.12	6.29	6.15	6.48	6.32	6.55	6.84	6.22	6.08	6.01	5.68	5.56	5.46	5.28	5.18	$-3.08	-37.3%	2035
Delaware	11.18	11.50	10.91	10.71	11.69	11.58	10.64	11.07	10.90	10.67	10.00	9.91	9.84	9.03	8.65	8.23	9.03	8.80	7.88	$-3.03	-27.8%	2041
Florida	10.91	9.24	9.48	9.37	9.05	8.75	8.06	8.29	8.07	7.99	7.87	7.66	7.30	6.15	5.61	5.99	5.99	6.06	6.17	$-3.31	-34.9%	2023
Georgia	11.29	10.60	11.42	11.30	11.28	10.73	10.18	10.28	9.86	9.25	9.13	9.14	9.30	7.88	8.24	8.29	8.43	8.59	8.32	$-3.10	-27.1%	2037
Hawaii	12.74	17.25	16.80	15.95	15.83	17.10	15.17	15.14	15.40	16.10	16.15	15.90	14.49	14.17	14.21	14.70	14.09	11.97	12.03	$-4.77	-28.4%	2063
Idaho	14.78	16.57	16.34	13.58	12.47	12.13	10.94	11.65	12.06	12.37	12.24	12.46	13.24	12.70	12.09	11.42	11.77	11.38	11.26	$-5.08	-31.1%	2087
Illinois	9.45	9.00	9.34	8.76	8.28	7.76	7.73	8.29	8.27	7.40	7.35	8.21	7.85	7.42	7.18	7.07	7.19	7.10	7.15	$-2.19	-23.4%	2066
Indiana	9.32	10.73	10.42	9.93	9.81	9.13	8.89	9.51	9.43	9.75	9.82	9.82	9.93	9.59	9.28	8.81	8.44	8.37	8.29	$-2.13	-20.4%	2115
Iowa	9.65	12.77	13.77	13.10	12.51	12.55	11.88	12.62	11.25	11.60	11.87	12.09	13.12	11.77	12.45	11.94	12.44	11.80	11.96	$-1.81	-13.1%	2203
Kansas	10.47	12.73	13.39	12.91	11.78	12.11	10.88	11.51	10.89	10.10	10.21	11.31	11.07	9.91	10.19	9.78	9.99	9.90	9.48	$-3.91	-29.2%	2051
Kentucky	12.58	12.12	13.27	12.96	12.72	11.79	11.97	11.69	11.29	11.92	11.53	11.51	11.86	11.59	10.72	9.97	10.24	9.97	9.71	$-3.56	-26.8%	2061
Louisiana	12.54	11.55	12.03	12.39	12.76	12.24	10.26	12.19	11.87	10.21	9.44	9.65	10.35	9.38	9.70	8.34	8.27	7.81	7.84	$-4.19	-34.8%	2025
Maine	10.89	8.33	7.87	8.34	7.48	7.44	6.29	7.23	8.07	9.37	9.81	9.71	9.86	8.83	8.03	7.71	7.44	7.44	7.32	$-0.55	-7.0%	N.A.
Maryland	8.13	9.68	9.34	9.34	8.73	8.84	8.14	8.64	8.47	8.17	8.46	9.14	8.97	7.69	7.31	6.58	6.64	6.56	6.40	$-2.94	-31.5%	2041
Massachusetts	6.54	6.75	6.51	6.88	6.26	6.42	5.38	8.39	8.30	8.66	7.75	6.66	5.32	4.30	4.63	5.79	6.14	5.90	4.96	$-1.55	-23.8%	2060
Michigan	10.44	10.51	10.55	10.37	9.19	8.71	8.54	9.67	10.02	9.72	9.45	9.21	9.19	9.02	8.81	8.33	8.26	7.94	7.69	$-2.86	-27.1%	2076
Minnesota	9.71	14.20	13.88	14.53	12.96	11.82	13.07	12.70	13.11	12.82	12.74	13.19	13.38	12.11	11.39	11.02	10.86	10.50	9.88	$-4.00	-28.8%	2058
Mississippi	16.12	16.21	18.22	17.59	18.08	15.81	16.80	15.58	17.49	14.20	15.76	14.87	14.43	12.49	12.66	12.43	16.17	15.64	14.87	$-3.35	-18.4%	2056
Missouri	8.59	9.02	8.92	8.81	7.97	7.51	6.98	7.37	7.46	7.20	7.35	7.60	7.58	6.36	6.39	6.17	6.57	6.65	6.67	$-2.25	-25.2%	2047
Montana	11.33	11.62	11.81	11.42	12.43	12.77	12.73	13.22	12.45	10.87	10.54	10.57	10.28	10.81	9.93	8.73	7.74	8.04	7.88	$-3.93	-33.3%	2031
Nebraska	10.51	13.00	13.40	12.72	12.70	11.60	11.35	11.91	10.77	10.35	11.10	12.27	13.23	12.26	12.71	11.77	11.64	11.41	11.43	$-1.97	-14.7%	2295
Nevada	9.44	10.76	9.91	9.13	7.66	7.35	7.02	6.99	7.78	7.58	7.36	7.94	7.63	8.23	8.17	6.87	6.15	6.46	6.28	$-3.63	-36.6%	2056
New Hampshire	4.95	5.26	4.97	4.65	4.67	3.77	2.93	3.70	3.90	4.09	3.91	3.53	3.25	3.25	3.08	3.20	3.42	3.09	2.82	$-2.15	-43.3%	2029
New Jersey	6.73	6.41	6.33	6.23	5.76	5.55	5.31	5.56	7.31	7.14	7.23	6.73	5.74	5.87	5.91	5.93	5.98	6.24	5.89	$-0.44	-7.0%	N.A.
New Mexico	14.40	14.98	16.42	15.78	16.79	16.26	14.83	16.37	16.06	14.37	15.09	15.75	16.71	16.12	16.10	15.98	16.57	16.57	15.88	$-0.54	-3.3%	N.A.
New York	11.13	10.52	10.52	10.57	10.27	9.96	9.66	10.27	10.02	9.66	9.69	9.21	8.31	6.94	6.63	6.82	6.89	6.06	5.59	$-4.93	-46.9%	2019
No Carolina	14.93	15.11	15.91	15.82	16.00	15.41	15.23	16.13	16.13	16.30	15.57	15.71	14.86	13.34	13.58	13.25	13.28	12.71	12.20	$-3.71	-23.3%	2062
North Dakota	8.71	13.38	15.14	16.18	18.97	16.14	14.12	13.70	14.68	13.95	13.51	16.34	14.49	15.03	14.70	13.14	13.23	12.73	12.72	$-2.42	-16.0%	2082
Ohio	7.09	8.03	7.98	7.93	6.82	7.61	7.41	7.92	8.17	8.41	8.38	8.46	8.51	7.66	7.08	7.08	7.16	7.24	6.99	$-0.99	-12.4%	2275
Oklahoma	9.17	10.69	11.02	11.13	11.78	12.59	11.22	10.17	11.08	9.52	10.11	10.49	11.16	11.15	11.30	10.19	9.83	9.56	10.13	$-0.89	-8.1%	2127
Oregon	12.08	13.38	13.25	12.62	10.27	9.07	9.61	9.85	10.05	9.73	9.44	9.61	9.36	9.37	9.45	7.81	7.37	7.47	7.08	$-6.17	-46.6%	2027
Pennsylvania	8.17	9.39	8.46	8.12	7.36	7.08	5.83	7.23	7.26	6.94	6.98	6.99	6.84	6.67	6.01	6.18	6.18	6.14	5.81	$-2.65	-31.3%	2054
Rhode Island	9.99	11.97	10.48	10.23	9.50	9.41	9.16	9.44	8.95	8.88	9.05	8.62	7.88	6.15	6.16	5.62	5.90	5.86	5.51	$-4.97	-47.4%	2016
So Carolina	17.06	16.05	16.36	16.31	15.89	14.69	13.82	15.04	15.13	13.66	14.02	13.66	13.47	11.97	11.50	10.18	10.36	10.17	10.01	$-6.35	-38.8%	2024
South Dakota	9.98	11.41	11.09	10.54	9.64	8.83	7.81	8.45	7.93	8.85	8.70	9.46	9.34	8.85	9.24	9.22	8.78	8.26	8.30	$-2.79	-25.2%	2109
Tennessee	10.05	9.80	11.28	11.15	10.05	9.61	9.14	10.62	11.15	11.09	10.78	10.71	10.25	8.93	9.16	9.06	9.21	8.96	8.45	$-2.83	-25.1%	2079
Texas	9.44	13.33	11.94	13.08	13.99	12.85	12.84	12.87	10.97	9.92	9.65	10.68	9.67	9.90	9.37	9.85	9.01	9.05	8.00	$-3.94	-33.0%	2027
Utah	16.08	17.34	17.58	16.93	15.54	15.56	14.10	15.54	15.52	14.07	13.60	13.21	13.25	13.21	13.36	12.84	13.25	12.97	12.86	$-4.72	-26.8%	2047
Vermont	10.70	8.62	9.41	8.46	8.44	8.38	7.92	7.96	7.80	7.00	6.87	7.03	6.45	5.64	5.38	5.03	4.75	4.78	4.41	$-5.00	-53.1%	2014
Virginia	10.31	11.00	12.08	11.24	10.81	10.97	9.84	10.53	10.27	10.27	10.59	10.42	9.34	8.43	7.40	7.03	6.99	6.65	6.76	$-5.32	-44.0%	2021
Washington	13.15	14.00	13.81	14.59	11.66	10.47	11.01	10.82	10.59	10.13	10.16	10.32	10.00	9.74	9.31	8.81	8.24	8.33	8.33	$-5.48	-39.7%	2025
West Virginia	12.53	12.91	13.31	12.88	12.60	11.81	11.41	12.23	12.27	11.66	12.08	11.42	11.46	11.29	11.05	10.69	10.34	10.50	10.52	$-2.79	-21.0%	2074
Wisconsin	15.08	13.94	13.53	13.30	12.06	11.56	11.69	11.46	11.02	10.60	10.42	10.55	10.54	10.02	10.16	9.76	9.81	9.15	8.48	$-5.05	-37.3%	2036
Wyoming	14.67	14.74	15.31	14.12	16.04	16.94	16.64	16.45	17.65	17.61	18.43	17.81	17.54	16.93	15.69	14.74	13.87	13.34	13.60	$-1.71	-11.2%	2205
All States	**$10.36**	**$11.05**	**$11.22**	**$11.16**	**$10.64**	**$10.12**	**$10.45**	**$10.28**	**$10.22**	**$9.68**	**$9.60**	**$9.74**	**$9.39**	**$8.62**	**$8.21**	**$7.96**	**$7.99**	**$7.88**	**$7.65**	**$-3.57**	**-31.8%**	**2035**

Because the appropriations data are not revised, we have chosen to not use revised state personal income data when calculating state tax fund appropriations per $1000 of personal income. Using final appropriations or expenditure data, and/or revised state personal income estimates would alter somewhat the data reported in this analysis.

State Appropriations for FY1997

For FY1997 states appropriated $46.5 billion for the operating expenses of higher education. This was *up* from $44.4 billion for FY1996 and $43 billion for FY1995.

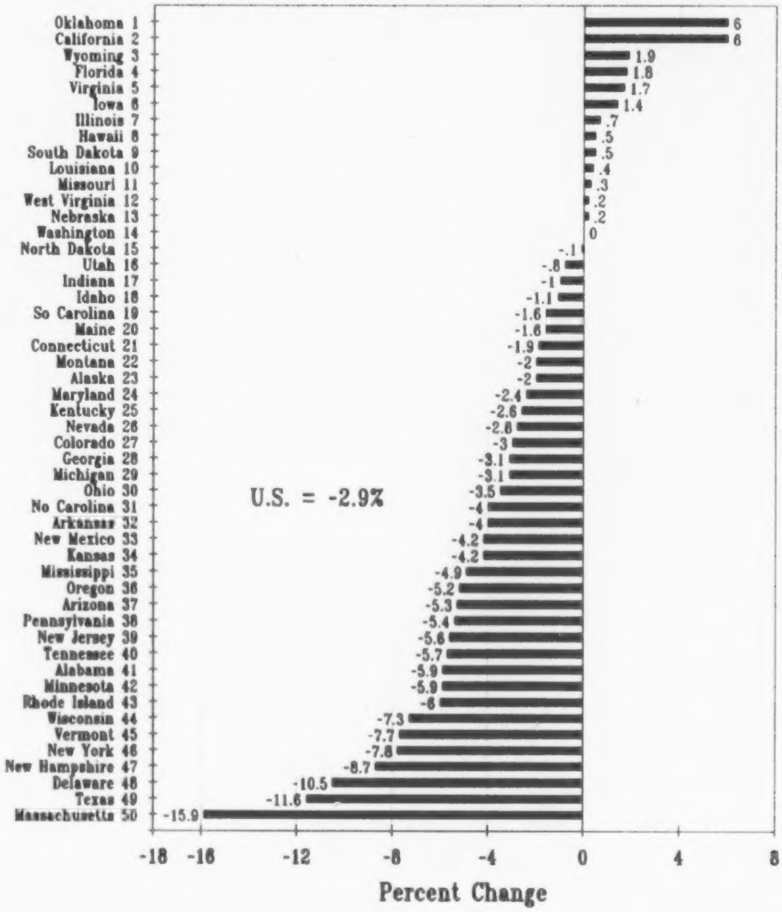
Controlling for state personal income, the FY1997 appropriation was $7.65 per $1000 of personal income. The FY1997 appropriation was *down* by 2.9 percent from $7.88 in FY1996, and by 4.3 percent from $7.99 in FY1995.

By state, state tax fund appropriations for higher education in FY1997 ranged from $2.82 per $1000 of personal income in **New Hampshire**, to $15.88 per $1000 of personal income in **New Mexico**. For many years New Mexico has ranked at the top of this list, and New Hampshire owns the bottom rank position.

Between FY1996 and FY1997, state tax fund appropriations for higher education declined by 2.9 percent. However, 13 states increased their state investment in higher education, one held even, and 36 states reduced their social investments in higher education.

- **Oklahoma and California** had the largest increases at 6.0 percent each.
- **Massachusetts** had the largest reduction in social investment at -15.9 percent.
- Other states with large reductions were **Texas** (-11.6 percent), **Delaware** (-10.5 percent), **New Hampshire** (-8.7 percent), **New York** (-7.8 percent), **Vermont** (-7.7 percent), and **Wisconsin** (-7.3 percent).
- Eight other states had declines of between 5 and 6 percent between FY1996 and FY1997.

Change in State Appropriation of Tax Funds for Higher Education per $1000 of Personal Income Between FY1996 and FY1997



Declining State Investment: 1979 to 1997

As the chart on the first page of this issue of **OPPORTUNITY** clearly shows, state investment in higher education had been in a state of continuous decline between FY1979 and FY1997. From a peak of $11.22 per $1000 of personal income in FY1979, to a record low of $7.65 by FY1997. This is a decline of 31.8 percent over this 18-year period. In only three of these 18 years did aggregate state investment increase over the prior year.

Over this 18-year period, state investment in higher education has declined in every one of the 50 states. Last year's lone exception--New Mexico--succumbed in FY1997 and reduced its state investment like every other state had done previously. The declines between FY1979 and FY1997 ranged from 3.3 percent in New Mexico to 53.1 percent in Vermont.

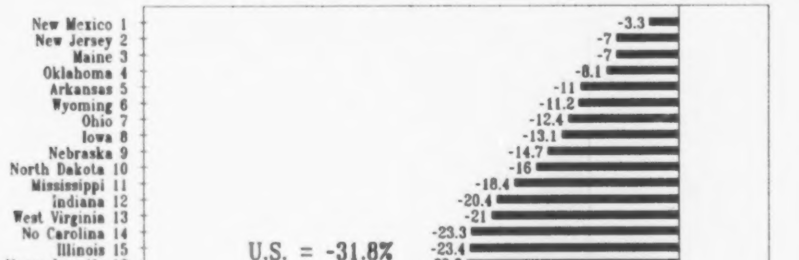
While Vermont is the first state to reduce its state investment in higher education by more than half, eight other states have already reduced their state investments by more than 40 percent. These states include: **Rhode Island** (-47.4 percent), **New York** (-46.9 percent), **Oregon** (-46.6 percent), **Colorado** (-45.5 percent), **Virginia** (-44.0 percent), **New Hampshire** (-43.3 percent), **California** (-43.2 percent) and **Arizona** (-42.0 percent). In addition, 13 more states have reduced state investment in higher education by 31 to 40 percent between FY1979 and FY1997.

Extrapolating the Trend

The trend toward reduced state investment in higher education is clear. The trend has been underway for 18 years and has occurred in all 50 states.

Because this change has been gradual year-after-year, the annual struggles to budget with declining state support may have obscured the fundamental underlying trend: *state appropriations for higher education are headed toward zero.* Public higher education is being privatized.

Change in Appropriations of State Tax Funds for Operating Expenses of Higher Education per $1000 of Personal Income Between FY1979 and FY1997



In a few places this trend is recognized and systems and institutions are evaluating semi-public arrangements. But more often we have found a sense of denial that states would actually be phasing out state support for public institution operations. After all, governors and legislatures created these public colleges and universities. "Just wait for another governor." " Someday the legislature will come to its senses."

Maybe those who hold to these views will in the end be proven correct. But the breadth and duration of these trends indicates otherwise. A more conservative electorate, unwilling to raise taxes, and preferring other public budget priorities, may continue to elect state officials who will share these views. We claim no divine insight to the future of public budget priorities, but the trends since FY1979 could not be clearer.

In an attempt to move the discussion of the meaning of reduced state investment in higher education forward, we will here extrapolate the trend toward reduced state tax fund appropriations for higher education per $1000 of state personal income to its conclusion. We have calculated for each state the year in which declining state appropriations for higher education reach zero.

Our extrapolation method is simple:

$$y = mx + b$$

where:

y = state tax fund appropriations for higher education per $1000 of state personal income
m = calculated slope
x = year
b = calculated constant

We have calculated m and b for each state for the fiscal years from 1979 through 1997. Then, setting y equal to zero, we solve for x--the year when state appropriations reach zero. The results of this extrapolation are shown in the spreadsheet, again in the chart on this page, and in the pages that follow for each state.

Vermont is the first state where state funds for higher education reach zero, in the year 2014--just 17 years from now. **California** will follow a year later, reaching zero in 2015. A year later **Rhode Island** reaches zero, in 2016, followed by **New York** in 2019, then **Virginia** in 2021, **Alaska** in 2022, **Florida and Colorado** in 2023, **South Carolina** in 2024, and **Louisiana and Washington** in 2025. The march to zero follows throughout the rest of the next century.

In only three states the slope of the trend line was not negative. These states are: **Maine, New Jersey** and **New Mexico**. These are the only three states that are not, over the last 18 years, reducing state tax fund appropriations for higher education.

The balance of this issue of **OPPORTUNITY** shows for each state the pattern of state tax fund appropriations for higher education per $1000 of state personal income for the years between FY1975 and FY1997. Each chart also notes the year when the extrapolated trend reaches zero.

Final Commentary

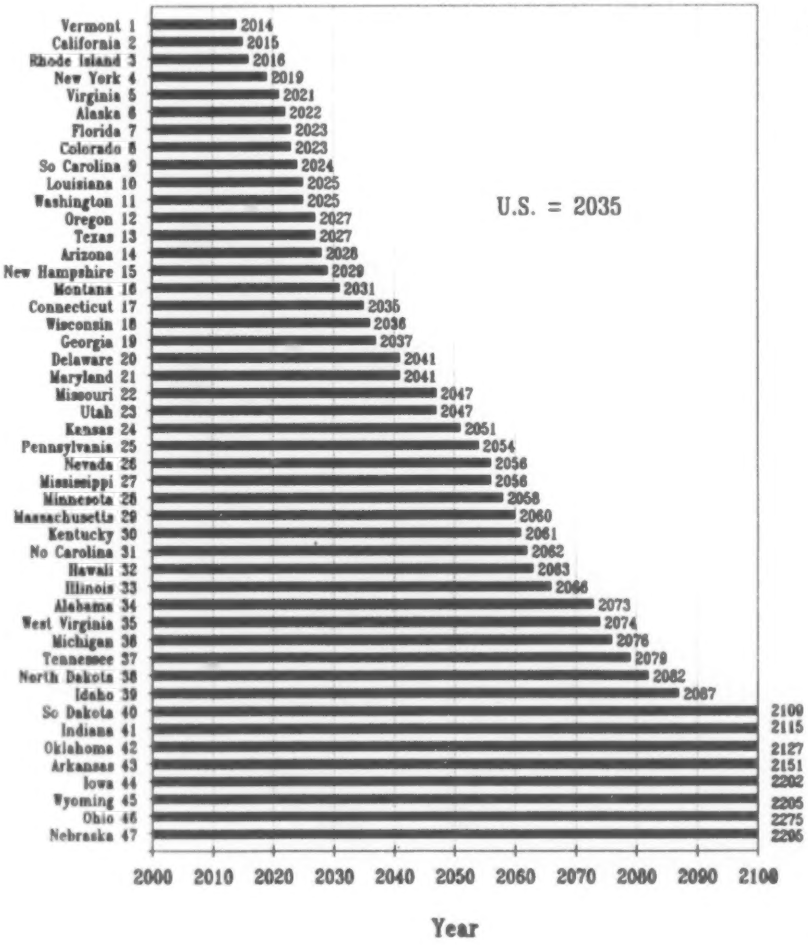
Higher educational opportunity costs money. States have been, until recently, the largest single source of money to provide opportunity for higher education. Capacity, quality and affordability--the three policy dimensions of higher education opportunity--are all driven by funding. Reductions in funding will sooner or later reduce one or more of these dimensions of opportunity for higher education for students.

State appropriations were, until 1992, the largest source of funding for higher education. But the continuous and widespread erosion of state support for higher education since 1979 has dropped state funding behind the fees paid by students. There are important governance issues that arise from the decline in state financial support for higher education, e.g., trustee appointments and management oversight. However, here we are focused on opportunity for education and training after high school.

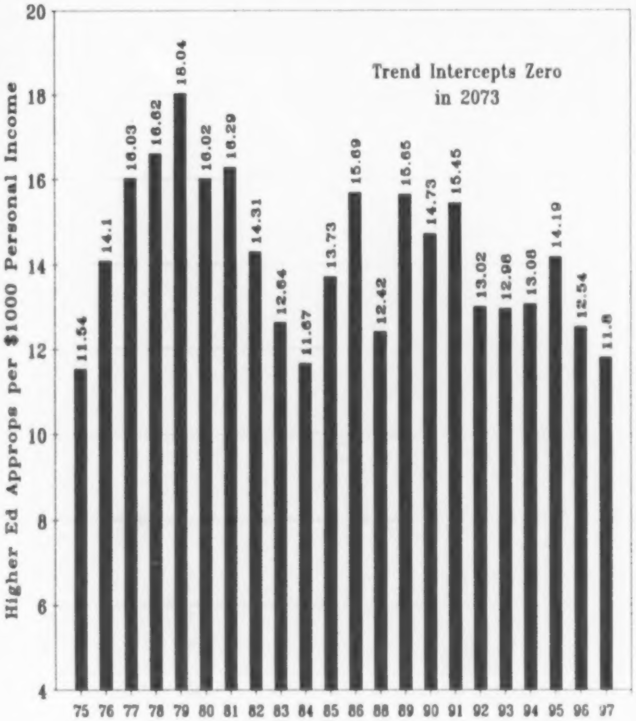
Underfunding institutions invariably results in either reduced capacity (e.g., enrollment limits, higher admissions standards) or reduced quality (e.g., larger classes, less qualified faculty, curtailed library and equipment purchases, inadequate course sections so that students cannot graduate in 4 years) or both. Raising student charges to offset the loss of state appropriations adds to the third problem of college affordability.

In an environment where more and better higher education, available to a broader representation of the adult population, is universally understood to be essential to our private and social welfare, the sharp cutbacks in state investment in higher education make little sense.

Year When Extrapolated Trend in State Appropriations for Higher Education Reaches Zero



Alabama Appropriations of State Tax Funds for Higher Education per $1000 of Personal Income FY1975 to FY1997



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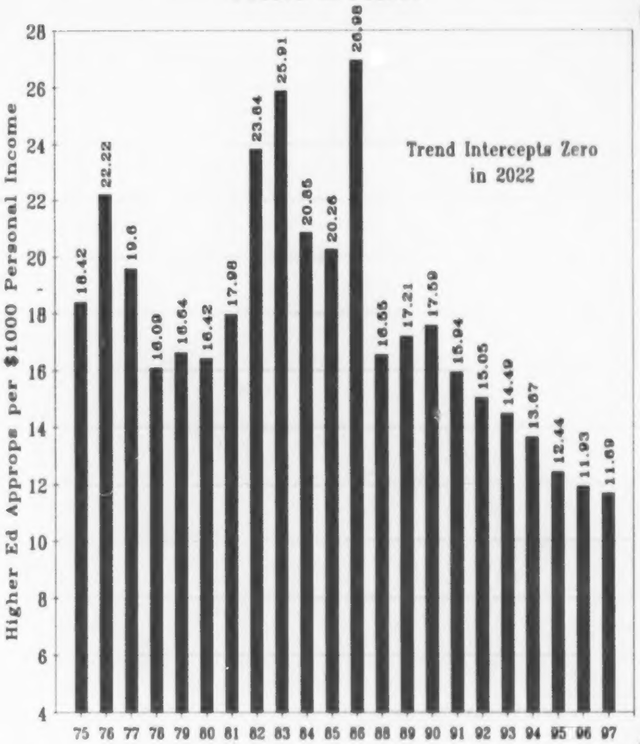

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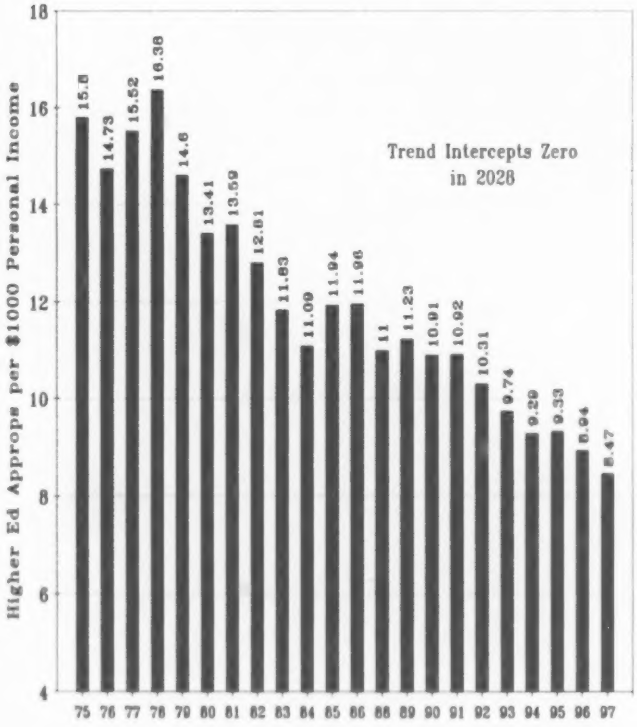
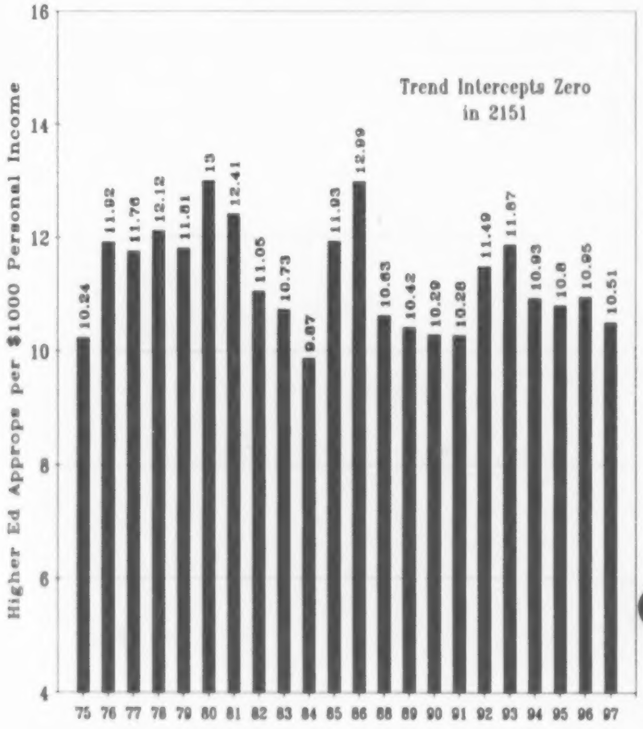


Arkansas Appropriations of State Tax Funds for Higher Education per $1000 of Personal Income FY1975 to FY1997



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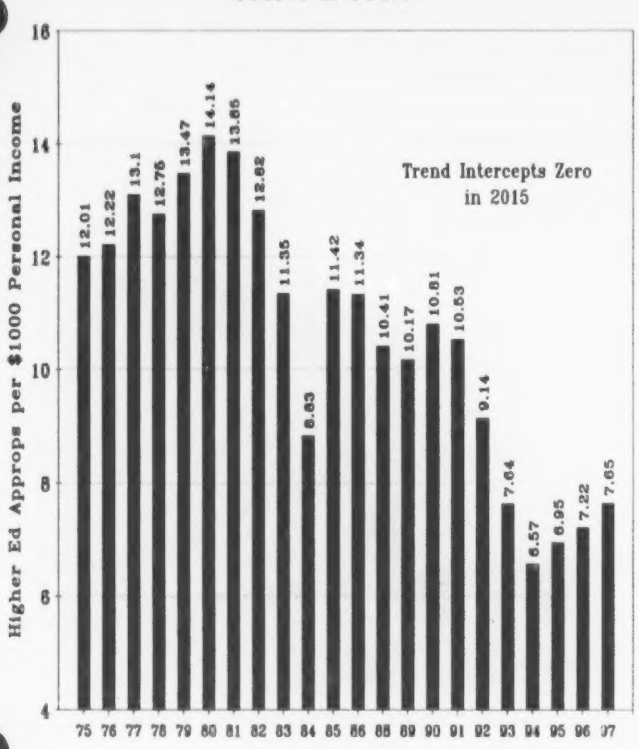

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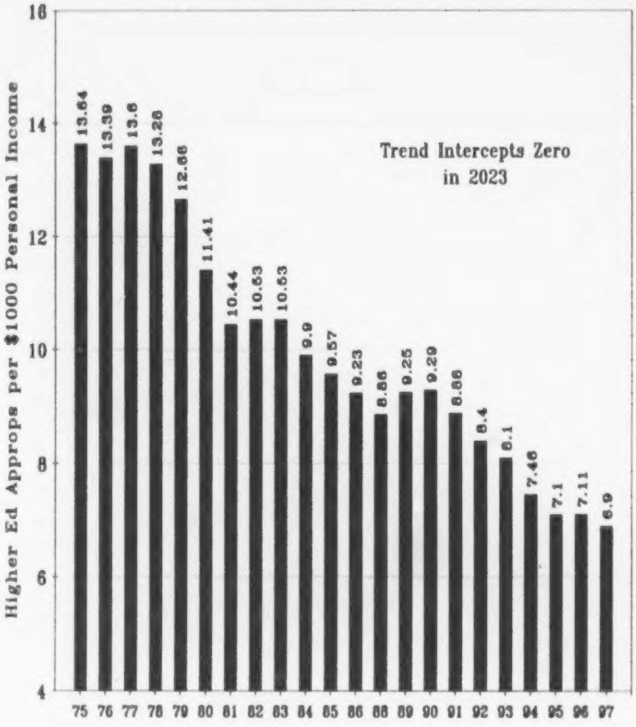

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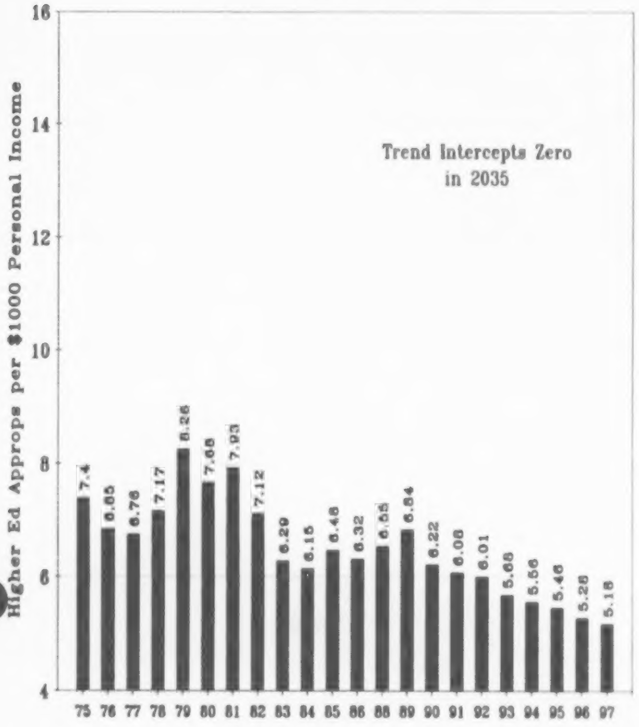

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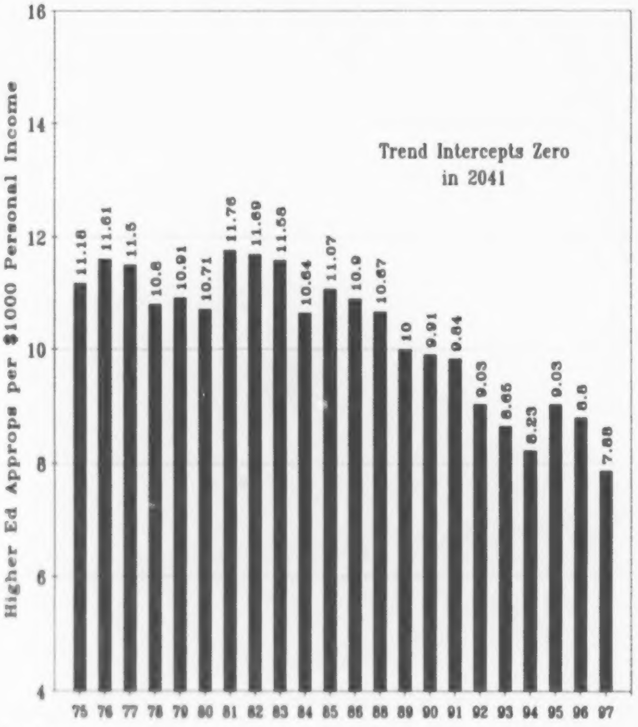

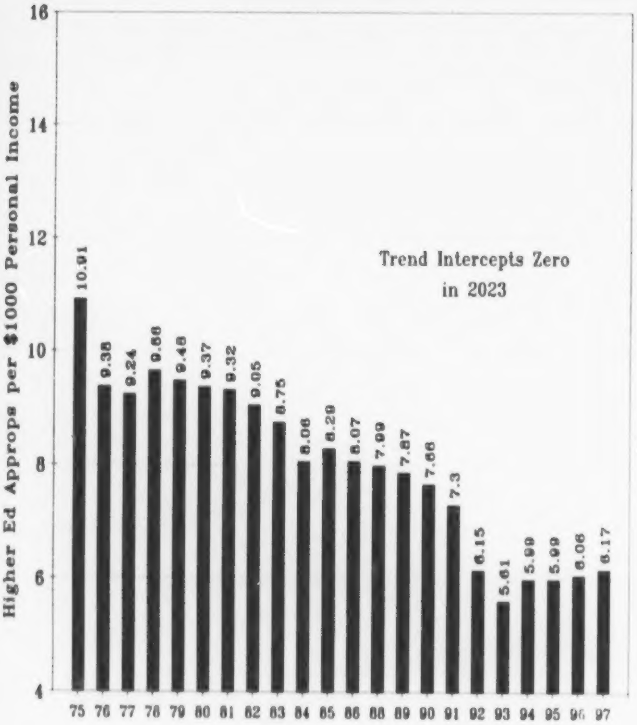

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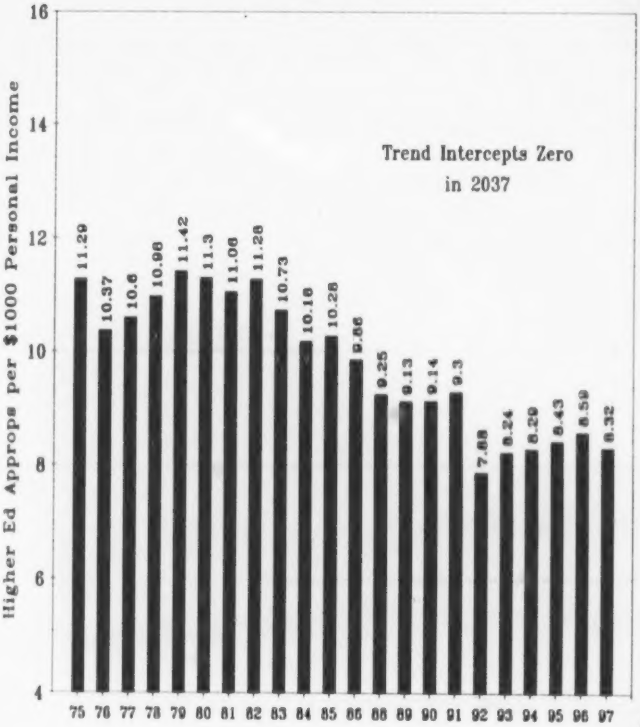
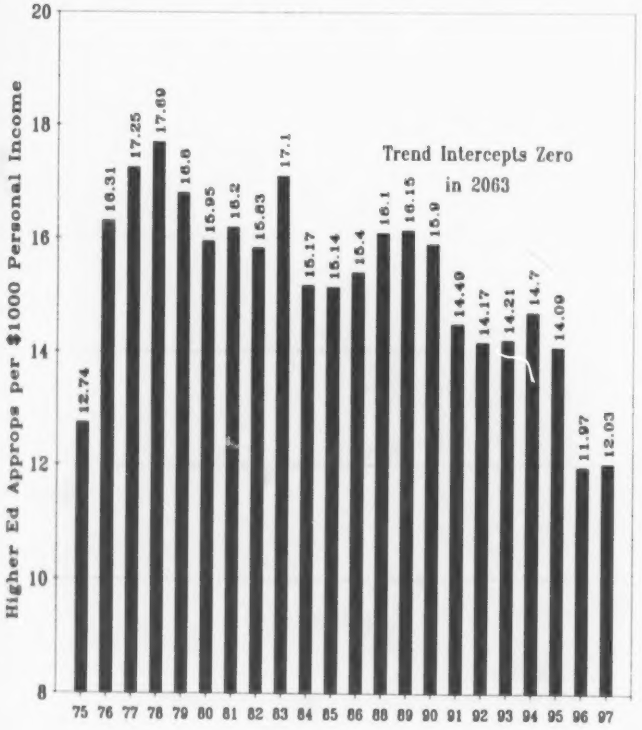
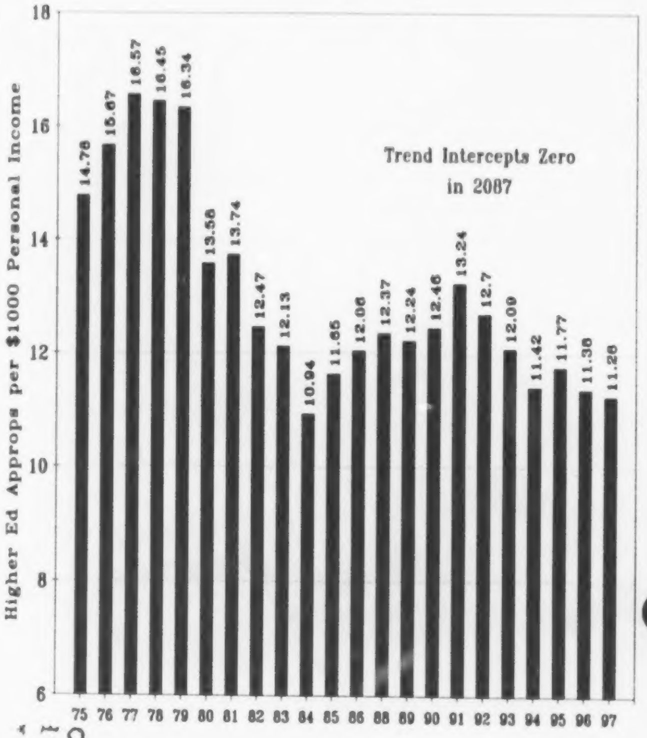


Georgia Appropriations of State Tax Funds for Higher Education per $1000 of Personal Income FY1975 to FY1997

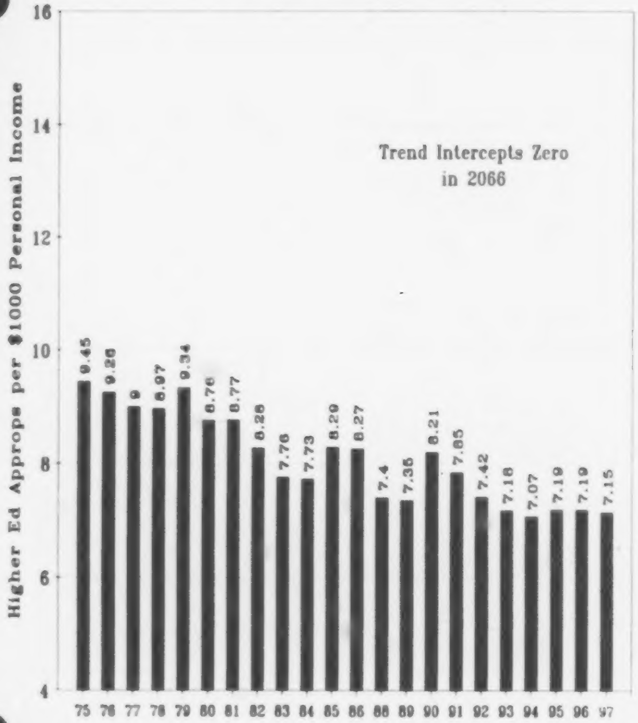


Hawaii Appropriations of State Tax Funds for Higher Education per $1000 of Personal Income FY1975 to FY1997



Idaho Appropriations of State Tax Funds for Higher Education per $1000 of Personal Income FY1975 to FY1997

Illinois Appropriations of State Tax Funds for
Higher Education per $1000 of Personal Income
FY1975 to FY1997



Indiana Appropriations of State Tax Funds for
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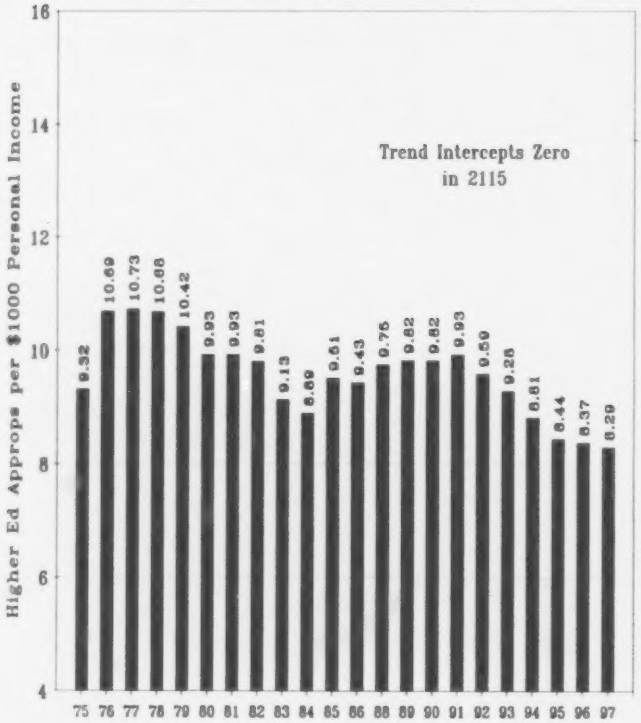
FY1975 to FY1997



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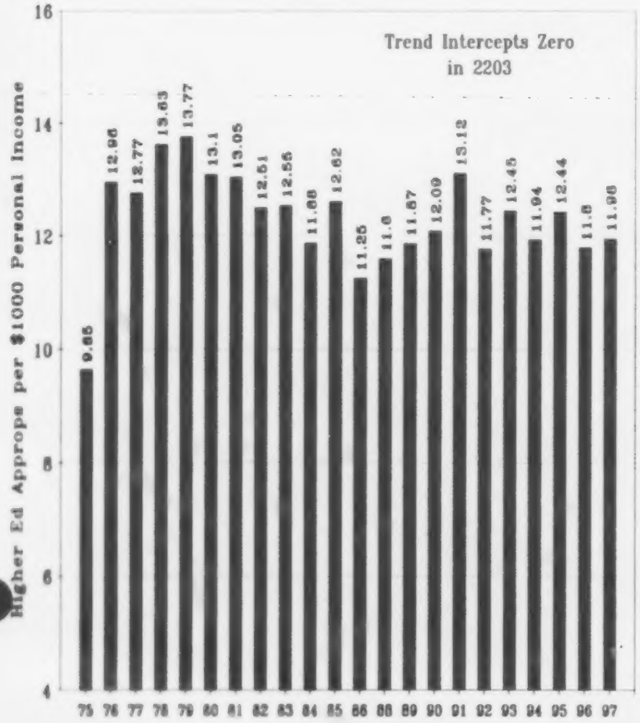
FY1975 to FY1997



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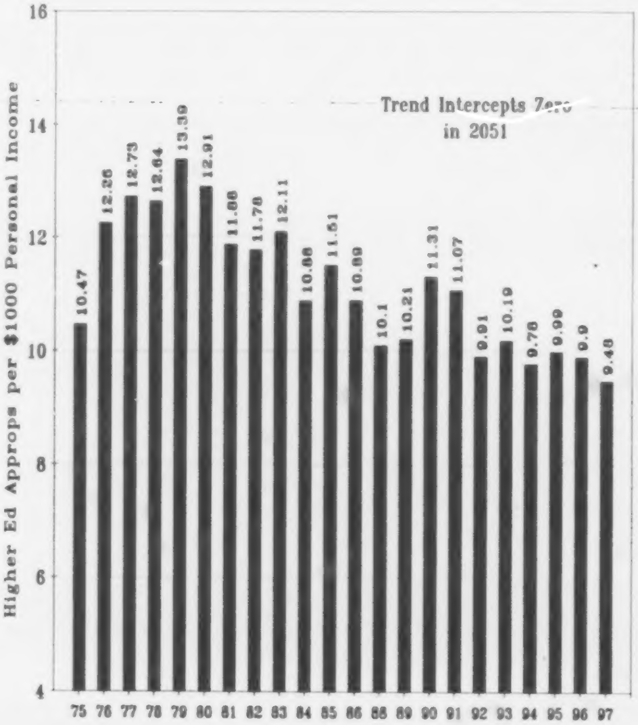
FY1975 to FY1997



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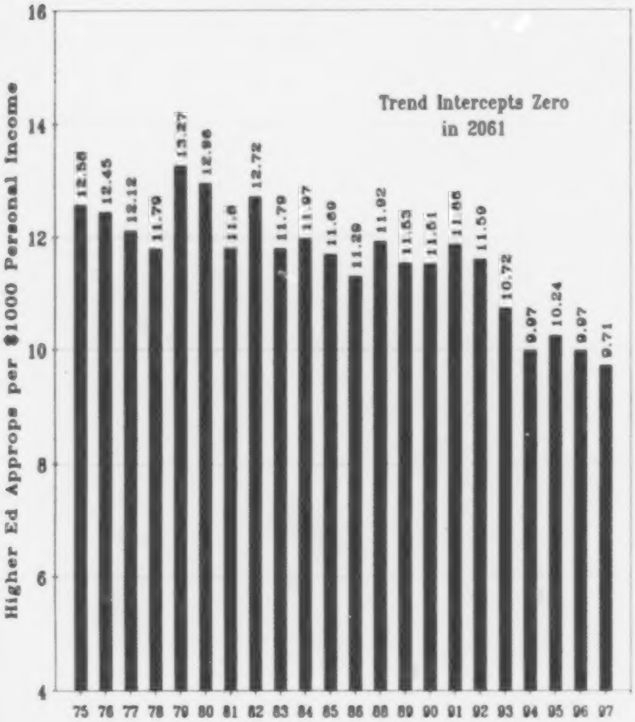

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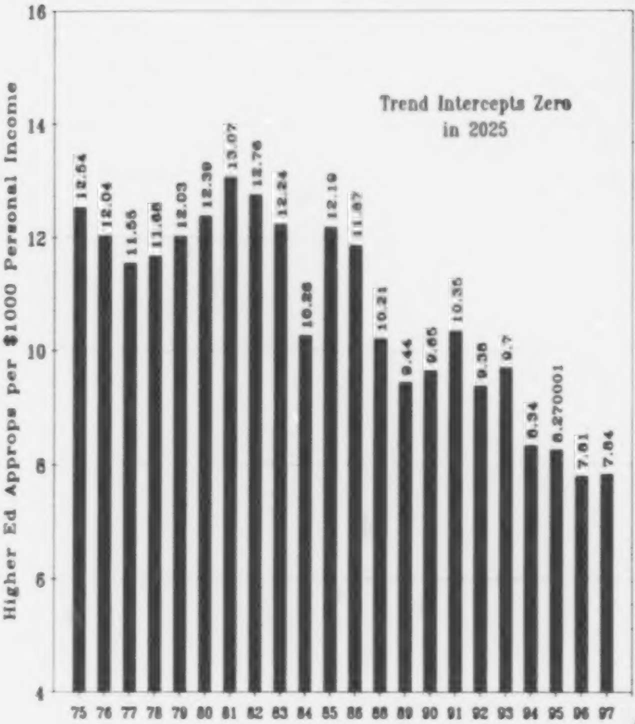
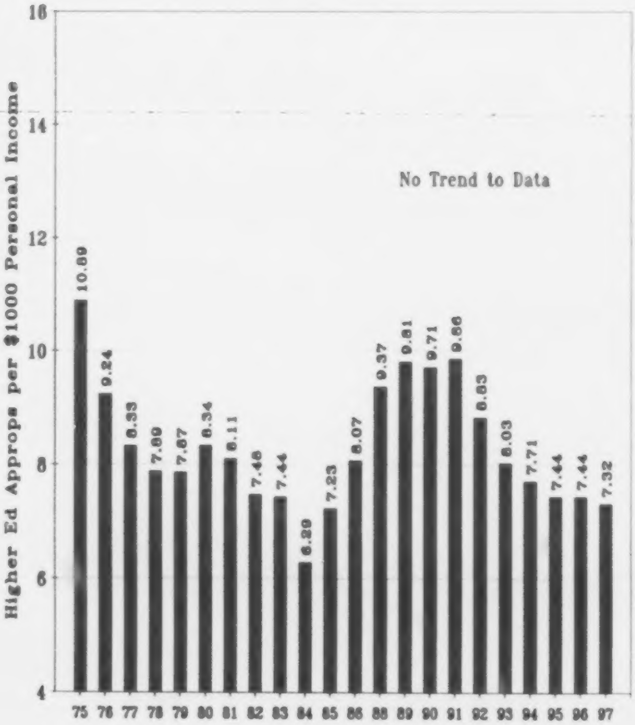
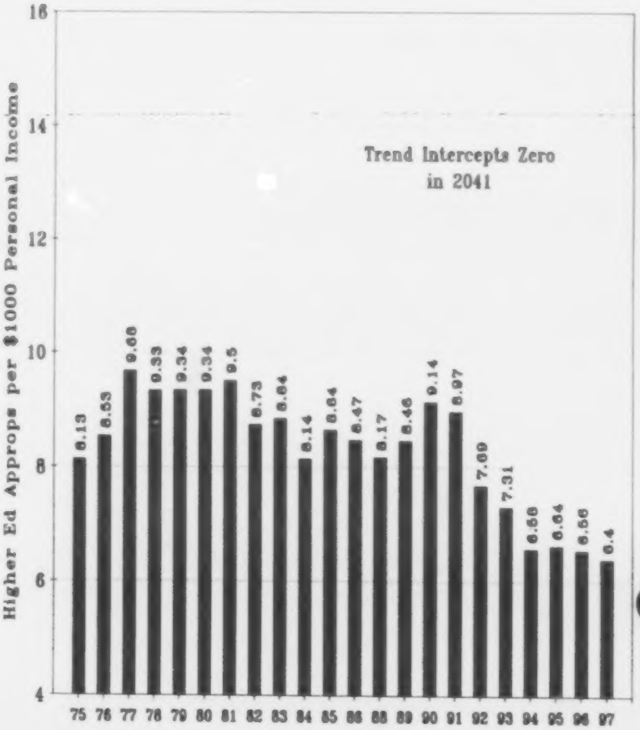


Maine Appropriations of State Tax Funds for Higher Education per $1000 of Personal Income FY1975 to FY1997



Maryland Appropriations of State Tax Funds for Higher Education per $1000 of Personal Income FY1975 to FY1997



Massachusetts Appropriations of State Tax Funds for
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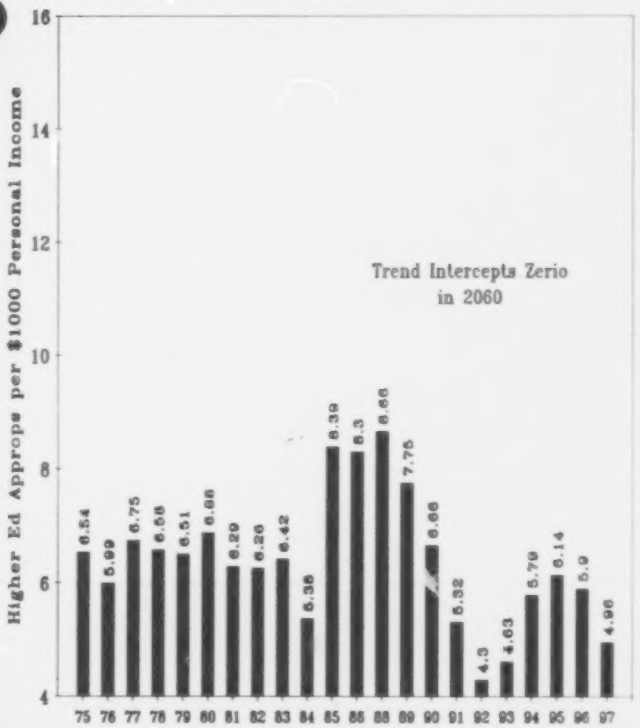
FY1975 to FY1997



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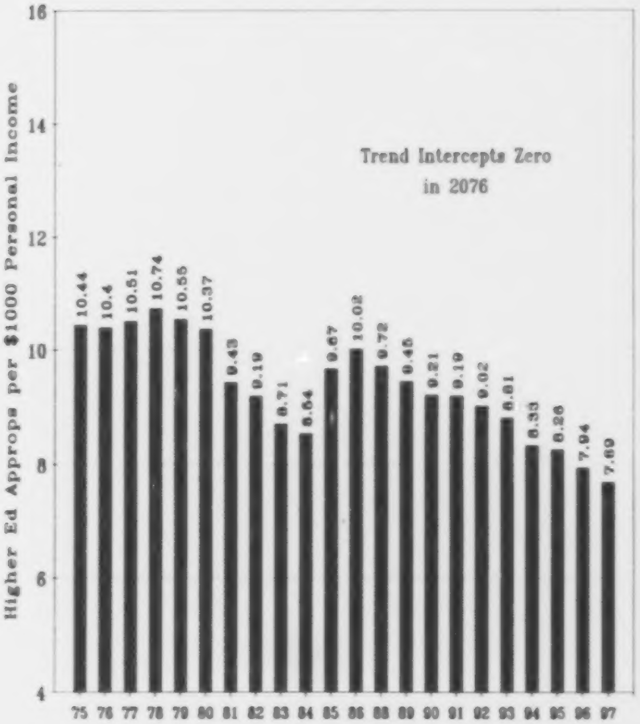
FY1975 to FY1997



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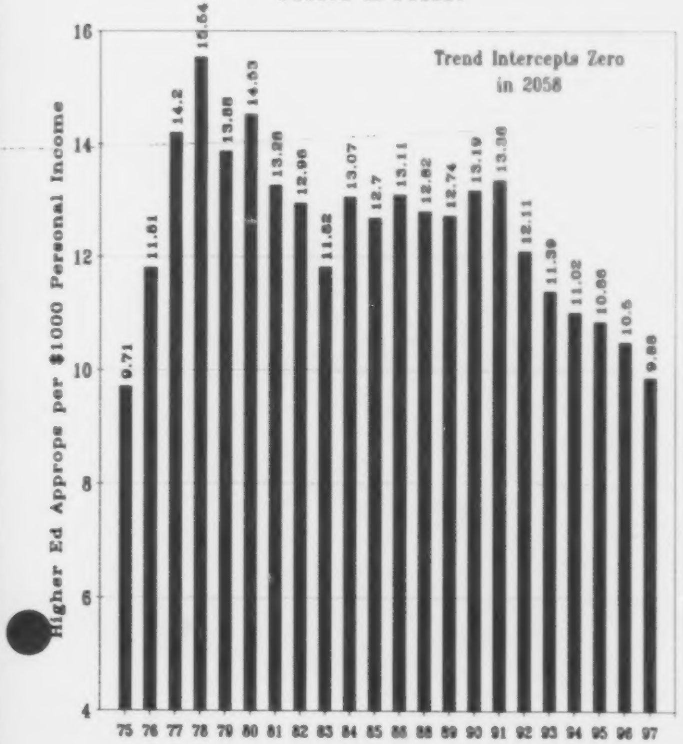
FY1975 to FY1997



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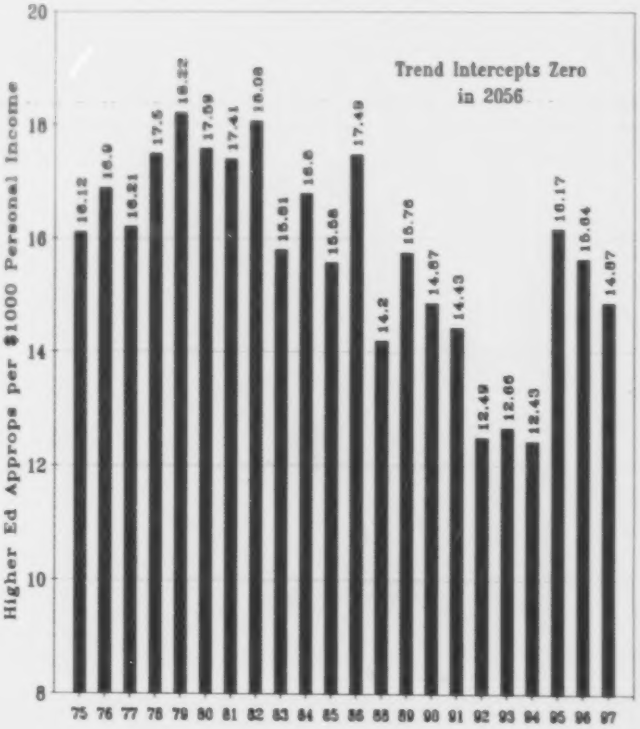
FY1975 to FY1997



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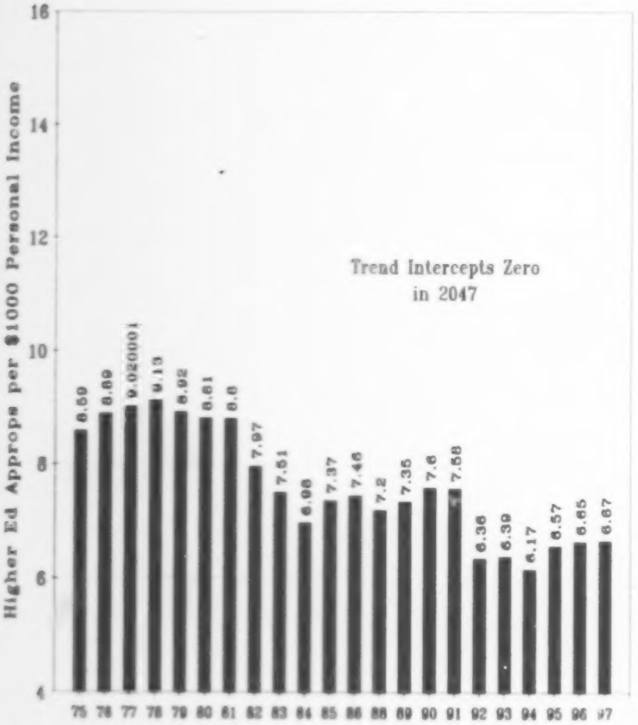
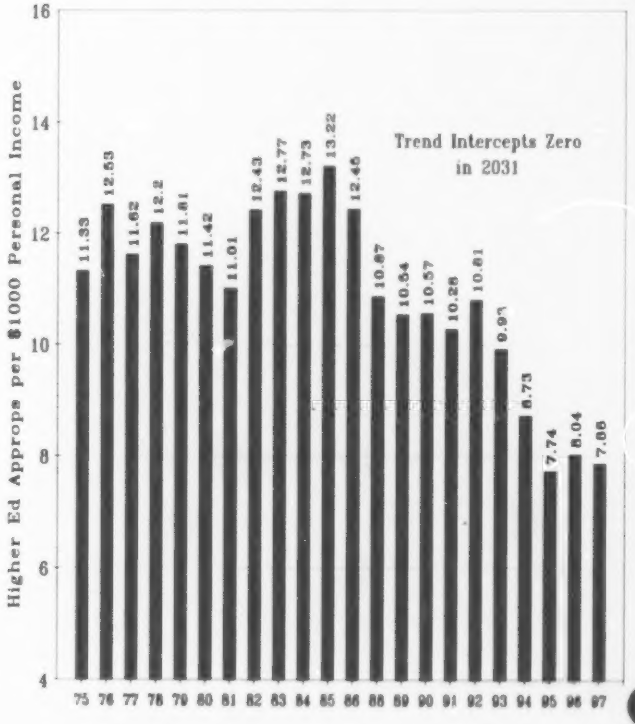


Montana Appropriations of State Tax Funds for Higher Education per $1000 of Personal Income FY1975 to FY1997



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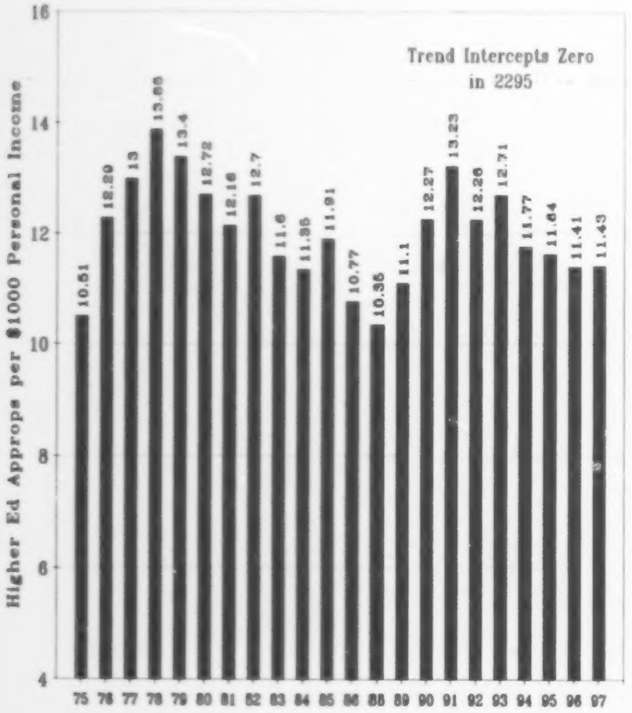

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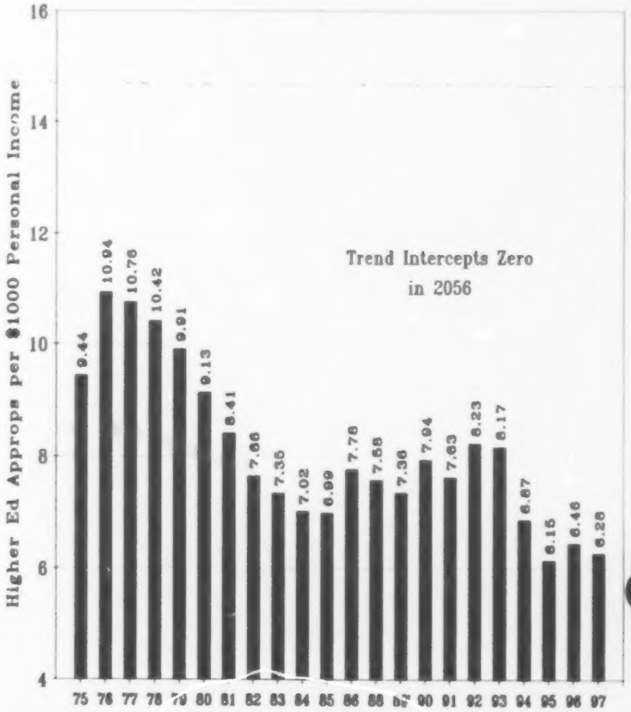

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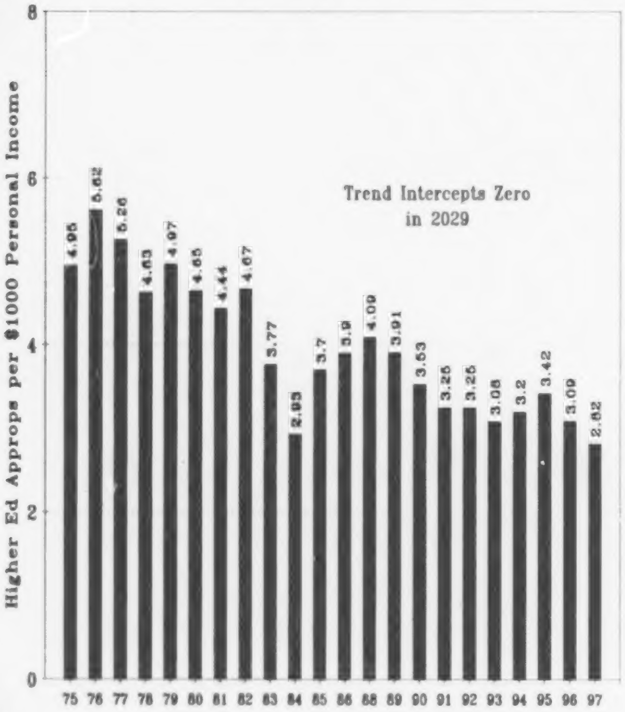

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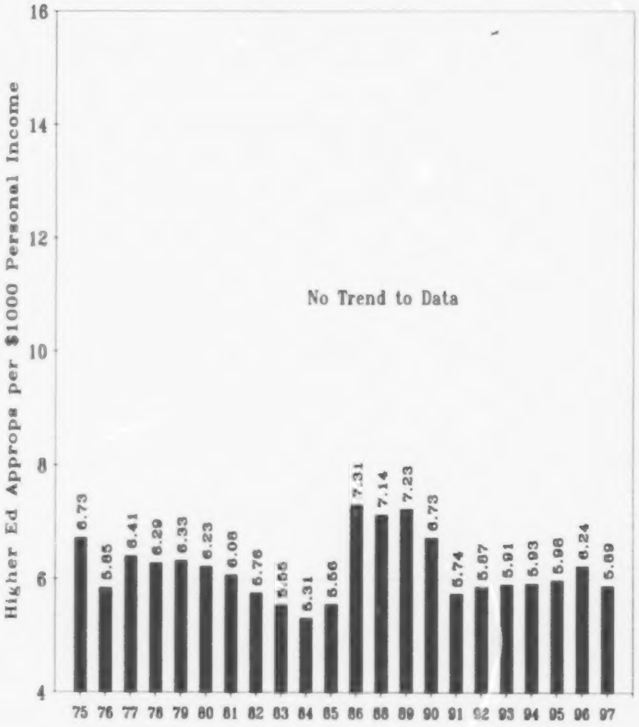
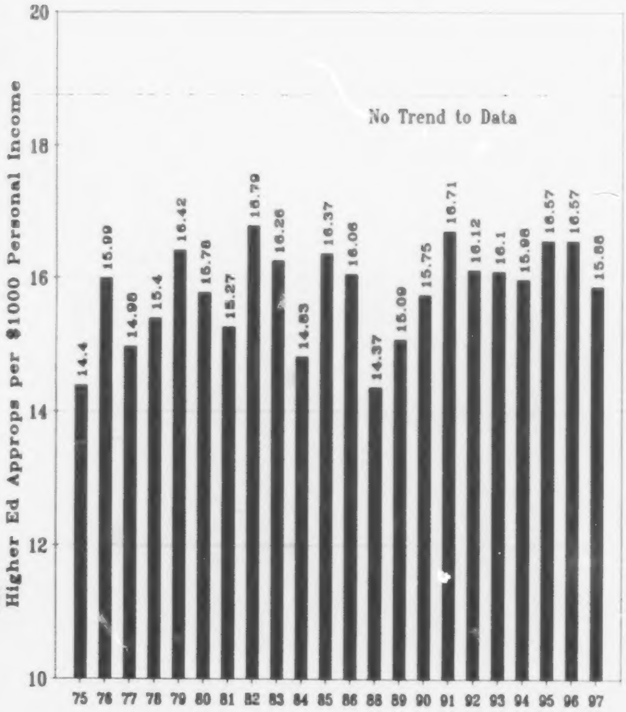


New Mexico Appropriations of State Tax Funds for Higher Education per $1000 of Personal Income FY1975 to FY1997



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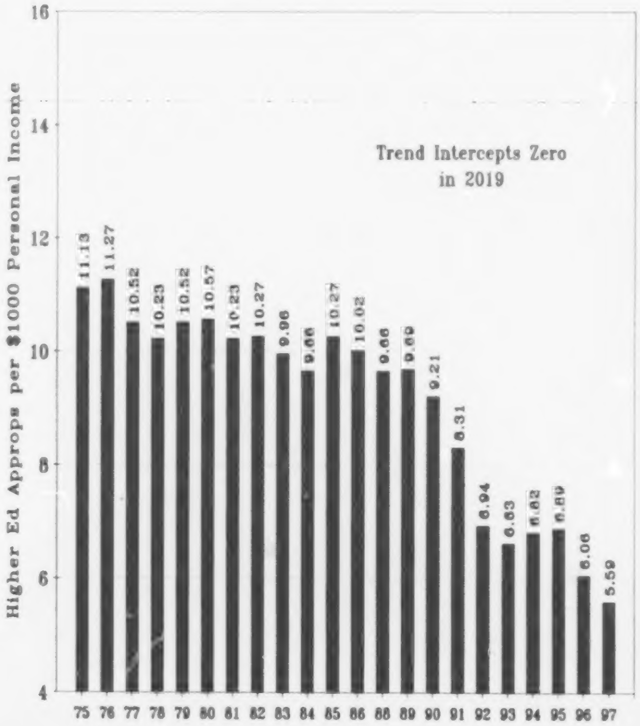

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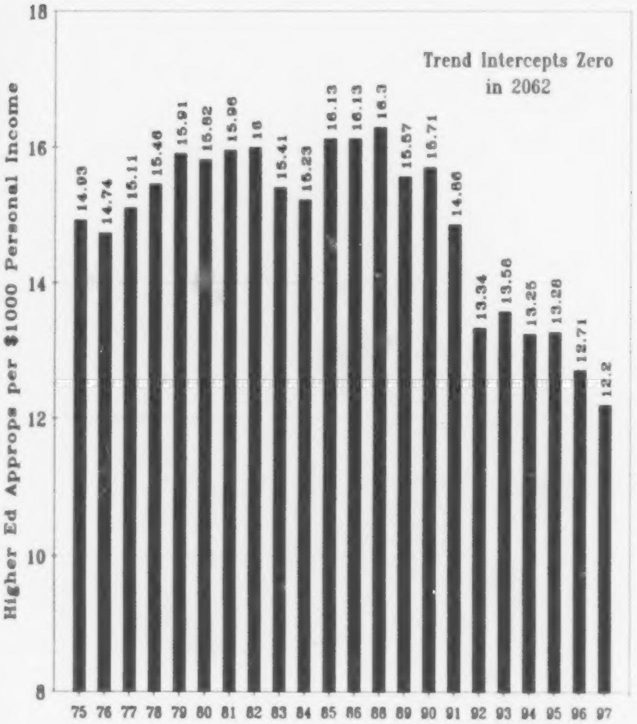
FY1975 to FY1997



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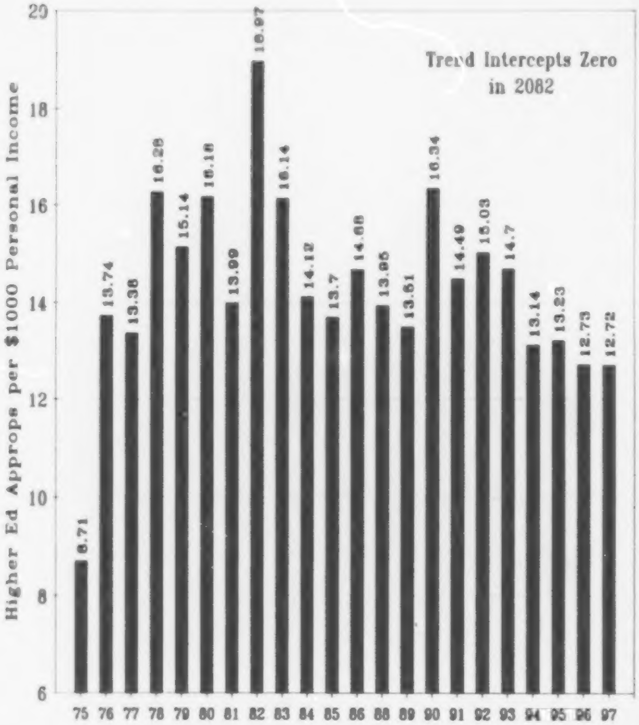
FY1975 to FY1997



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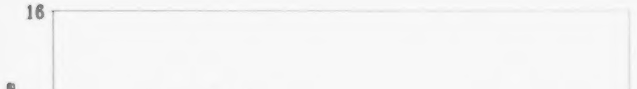
FY1975 to FY1997



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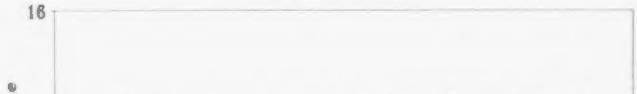
FY1975 to FY1997



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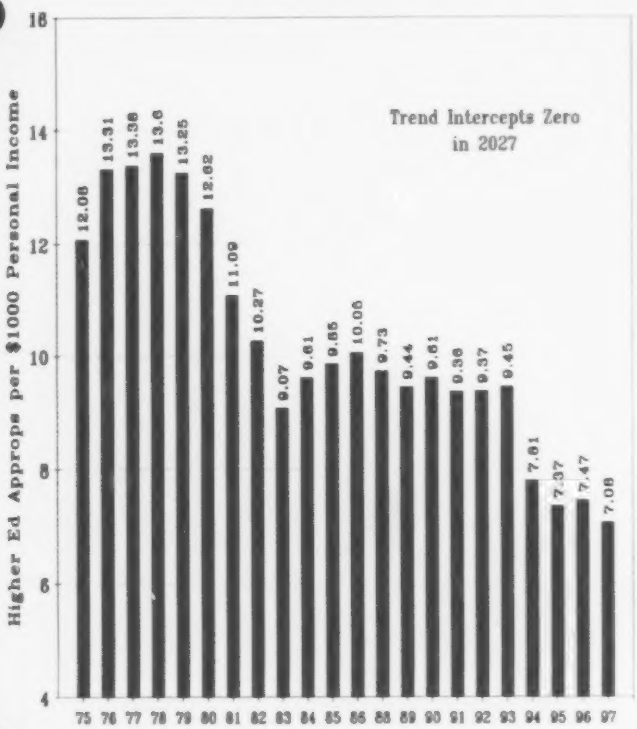

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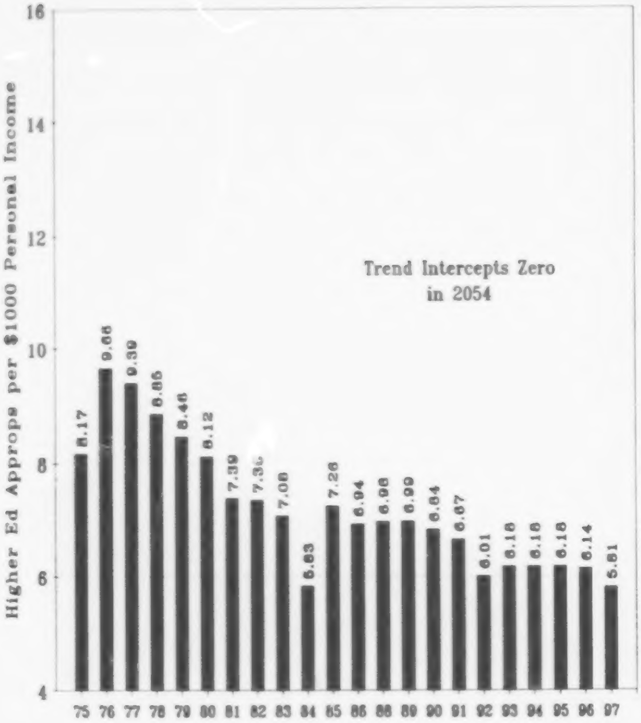

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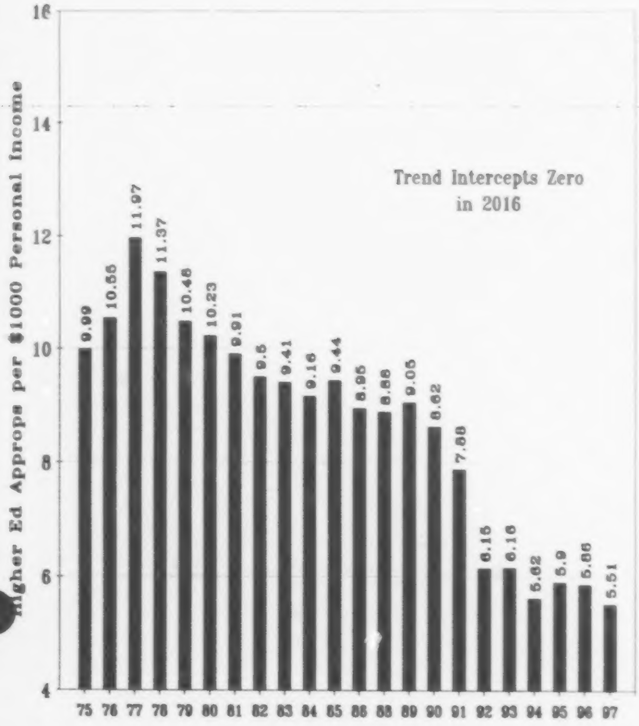

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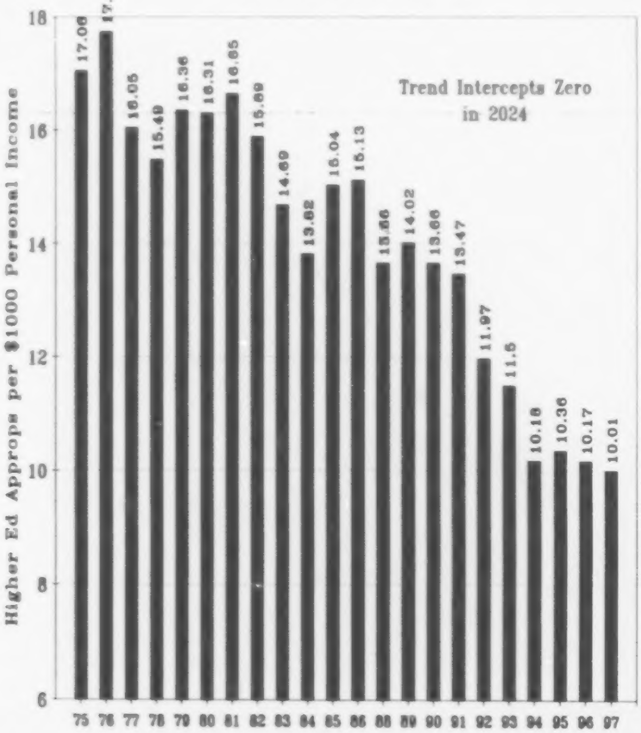

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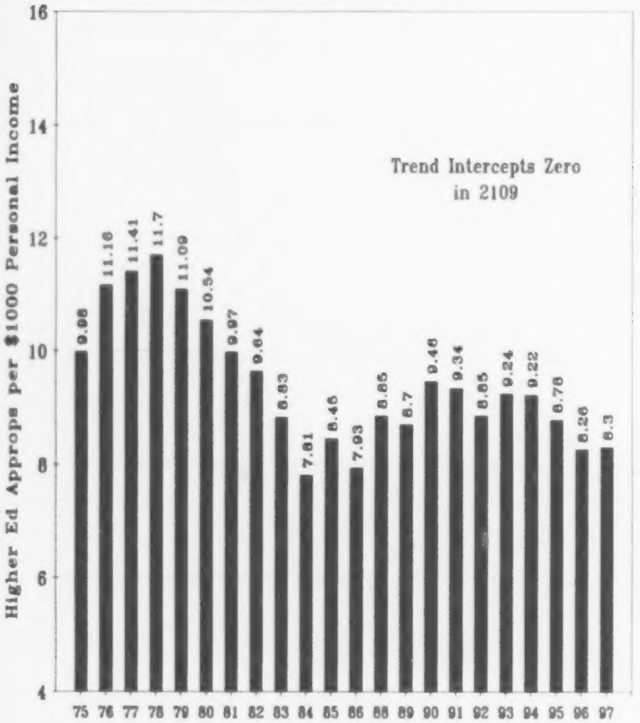

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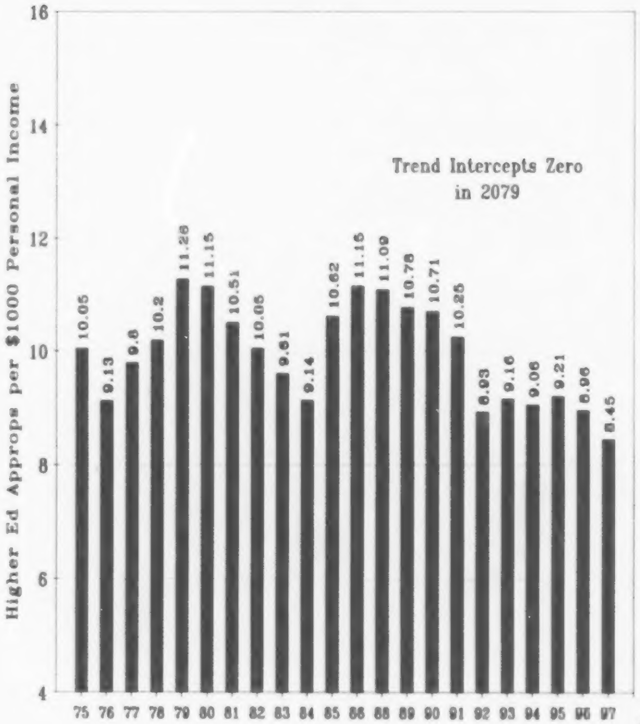

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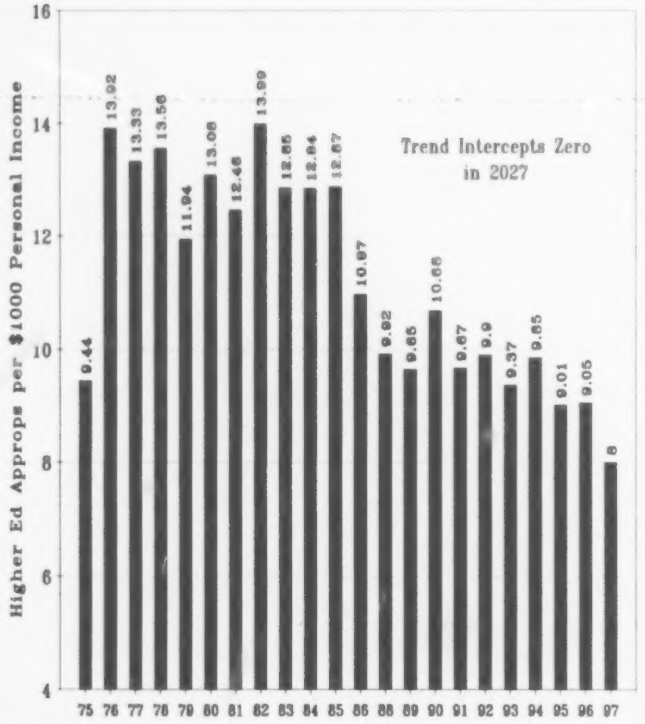

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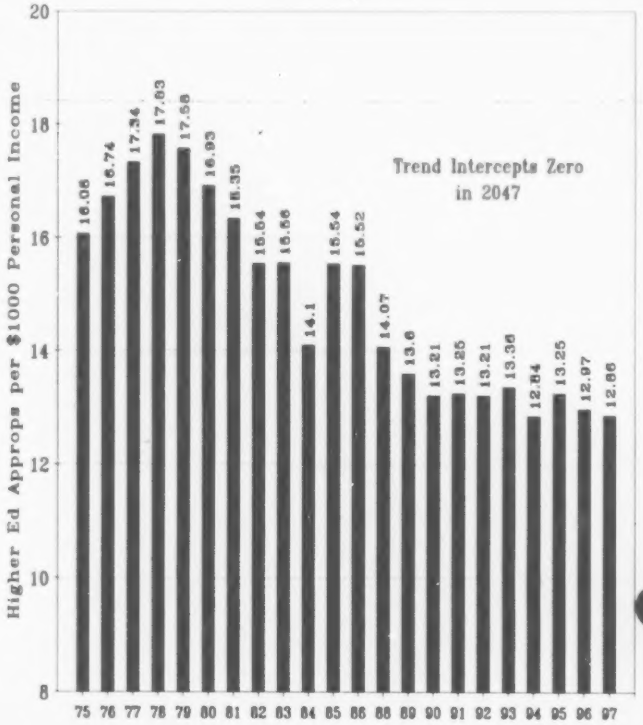

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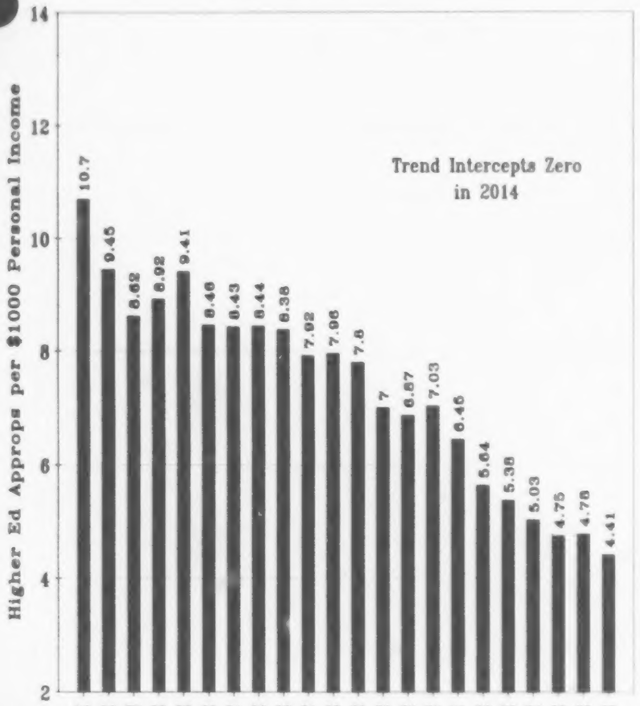

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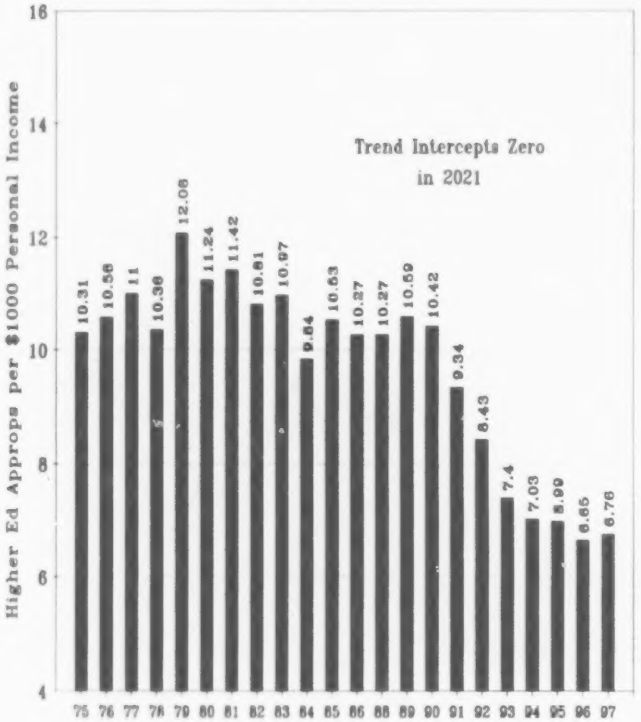
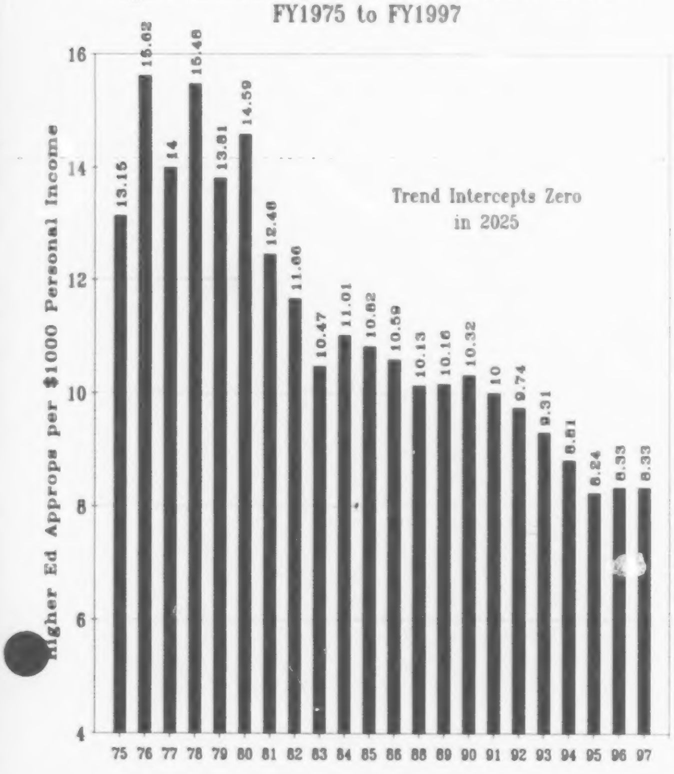


Washington Appropriations of State Tax Funds for Higher Education per $1000 of Personal Income FY1975 to FY1997



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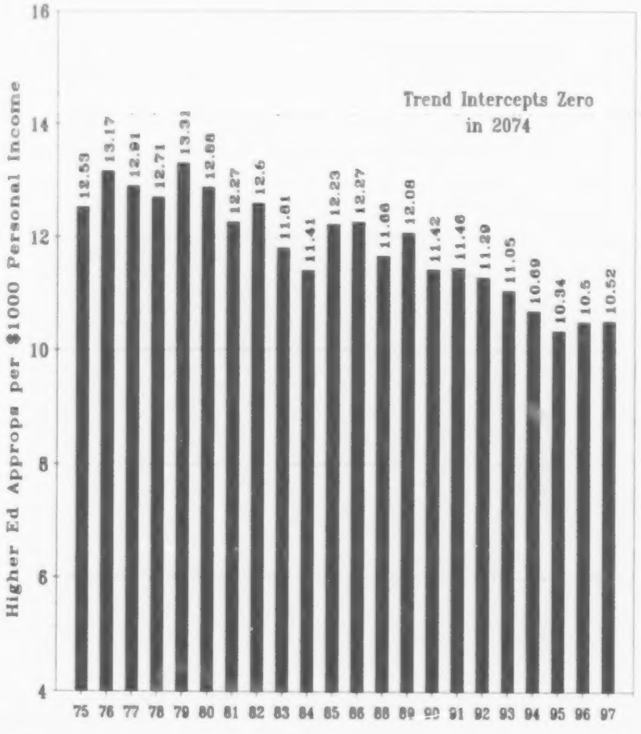
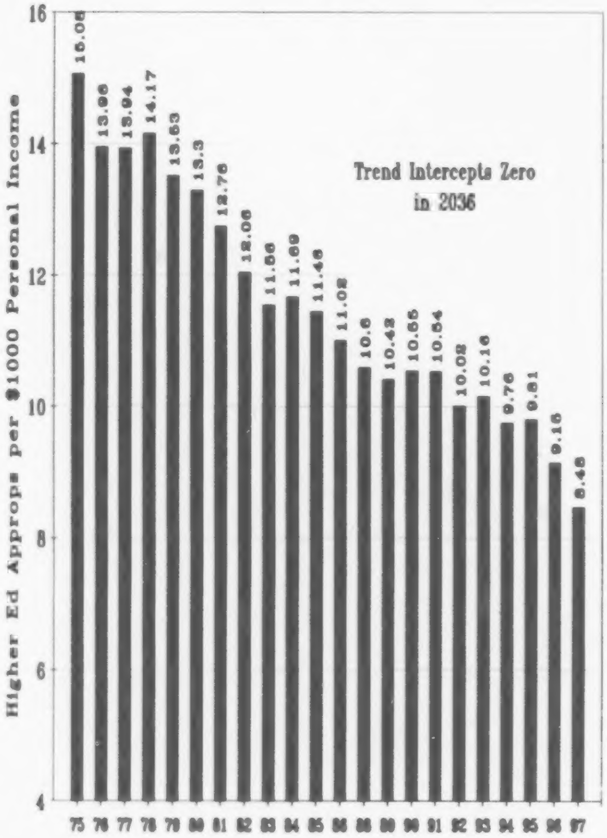
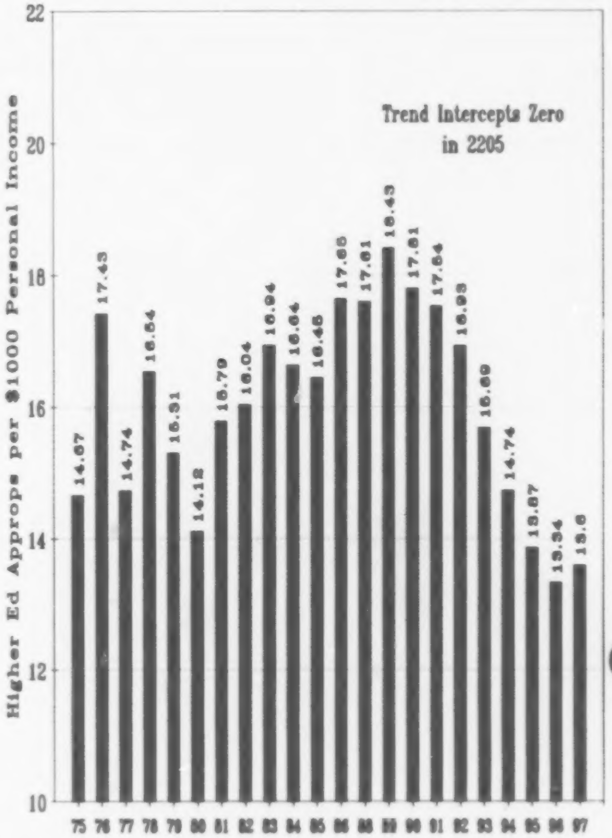


Wisconsin Appropriations of State Tax Funds for Higher Education per $1000 of Personal Income FY1975 to FY1997



Wyoming Appropriations of State Tax Funds for Higher Education per $1000 of Personal Income FY1975 to FY1997



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Postsecondary Education
OPPORTUNITY

The Mortenson Research Seminar on Public Policy Analysis of Opportunity for Postsecondary Education

Number 54 **Iowa City, Iowa** **December 1996**

What comes out . . . *. . . depends on what goes in*

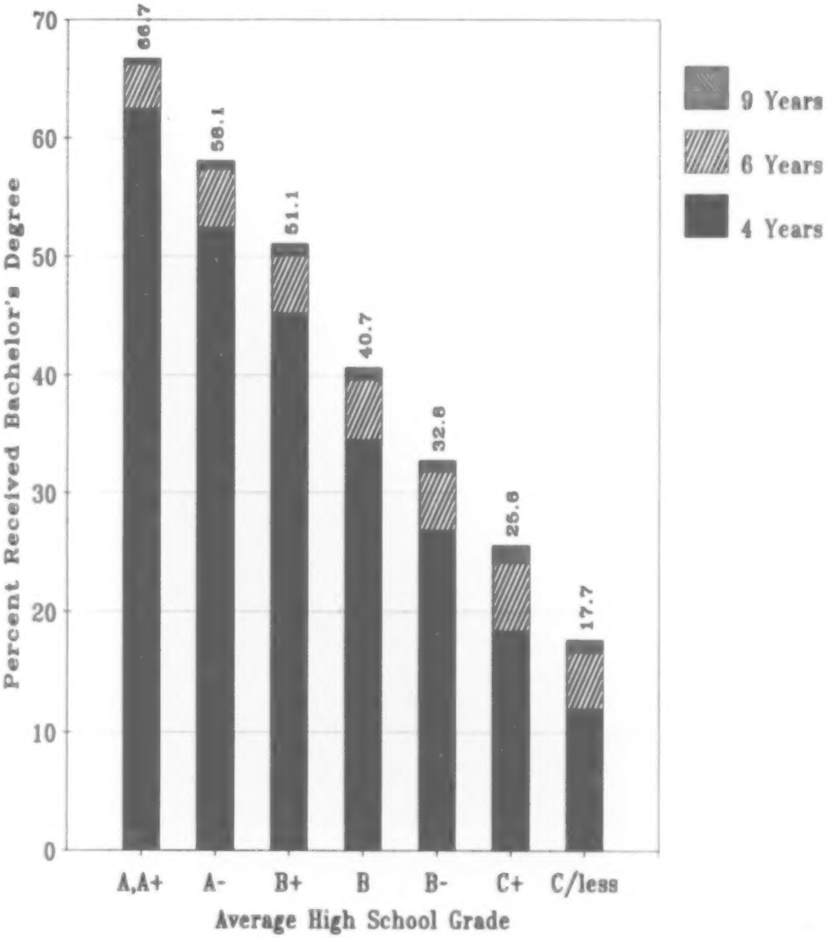
Institutional Graduation Rates by Pre-College Academic Records

Institutional graduation rates provide one important indicator of a student's chances of receiving a degree from the institution where he/she enrolls. This information is important to the informed investment decision about whether and where to enroll in college. This investment decision often involves the prospect of considerable educational debt. The prospective student must therefore weigh prospective investment returns and the probability of attaining them, in addition to the many costs incurred while enrolled in college.

However, much of the published data on institutional graduation rates--such as that often found in college guides--is raw data, unsuitable for either comparing chances for success in different institutions or for judging one's own chances for success at any particular institution. For the most part, these raw data--such as that reported by the NCAA--describe far more about the academic backgrounds of students admitted to particular institutions than they do about what happens to students once they enroll in institutions.

Here we reproduce some of the data recently reported in an important study of degree attainment in 4-year colleges and universities by the Higher Education Research Institute at the University of California, Los Angeles. The focus here is on the pre-college academic variables known to be causally related to success in college: high school grades and Scholastic Aptitude Test scores.

Institutional Graduation Rates at 4-Year Institutions
by Average High School Grade
1985 Freshman Cohort



These data vividly portray the stark differences in probabilities of graduation that individuals with different pre-college academic records face when entering college. These data also offer invaluable reference points for institutions wishing to evaluate and/or improve graduation rates, and for those working within institutions who provide academic support services to targeted populations and who wish to measure academic progress of their targeted populations.

The Data

These data are based on follow-up studies of the cohort of college freshmen that began full-time study at 365 baccalaureate-granting institutions in the fall of 1985. These freshmen were initially participants in the fall 1985 survey of American college freshmen.

Astin, A.W., Green, K.C., Korn, W.S., and Schalit. (1985). *The American Freshman: National Norms for Fall 1985.* Los Angeles: Higher Education Research Institute, UCLA.

A sampling procedure involved selecting samples from institutions participating in the 1985 survey and sending rosters to registrars after four, six and nine years. Results were weighted to reflect national norms for all first-time, full-time entering freshmen at American colleges and universities in the fall of 1985.

The study from which data reported here were taken is:

Astin, A.W., Tsui, L., and Avalos, J. (1996). *Degree Attainment Rates at American Colleges and Universities: Effects of Race, Gender, and Institutional Type.* Los Angeles: Higher Education Research Institute, UCLA.

Copies of the report may be purchased for $14.79 by calling the Higher Education Research Institute at (310) 825-1925.

The complete report contains far more data than that summarized here. Institutional graduation rates are calculated at four, six and nine years after entering college for students classified by race/ethnicity, gender, 4-year institutional type, high school grades, and SAT V+M (with conversion assistance from ACT scores provided also).

Most important, this study provides formulas that institutions may use to calculate an expected institutional graduation rate *given the academic backgrounds of the students they enroll.* Astin has stressed this theme repeatedly in his prior work.

This theme was also addressed in the March 1995 issue of OPPORTUNITY. We analyzed the raw institutional graduation rate data reported to and used by US News as a ranking factor in their attempt to identify "America's Best Colleges." Our analysis led us to calculate an expected institutional graduation rate for each national liberal arts college and university included in the US News list *based on the average SAT score for entering freshmen.* We then ranked these colleges and universities based on the difference between their actual and predicted IGRs. (Our analyses are still available on request. We plan to update our prior analysis by spring.)

High School Grades

The chart on page 1 of this issue of OPPORTUNITY summarizes institutional graduation rates for the 1985 cohort of college freshmen at 4, 6 and 9 years after entering college in terms of their high school grade averages. The relationship could not be more striking: IGRs at 9 years

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Mission Statement

This research letter is founded on two fundamental beliefs. First, sound public social policy requires accurate, current, independent, and focused information on the human condition. Second, education is essential to the development of human potential and resources for both private and public benefit. Therefore, the purpose of this research letter is to inform those who formulate, fund, and administer public policy and programs about the condition of and influences that affect postsecondary education opportunity for all Americans.

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ranged from 17.7 percent of those with high school grade averages of C or less, to 66.7 percent of those with high school grades averages of A or better. The relationship between the extremes was nearly linear.

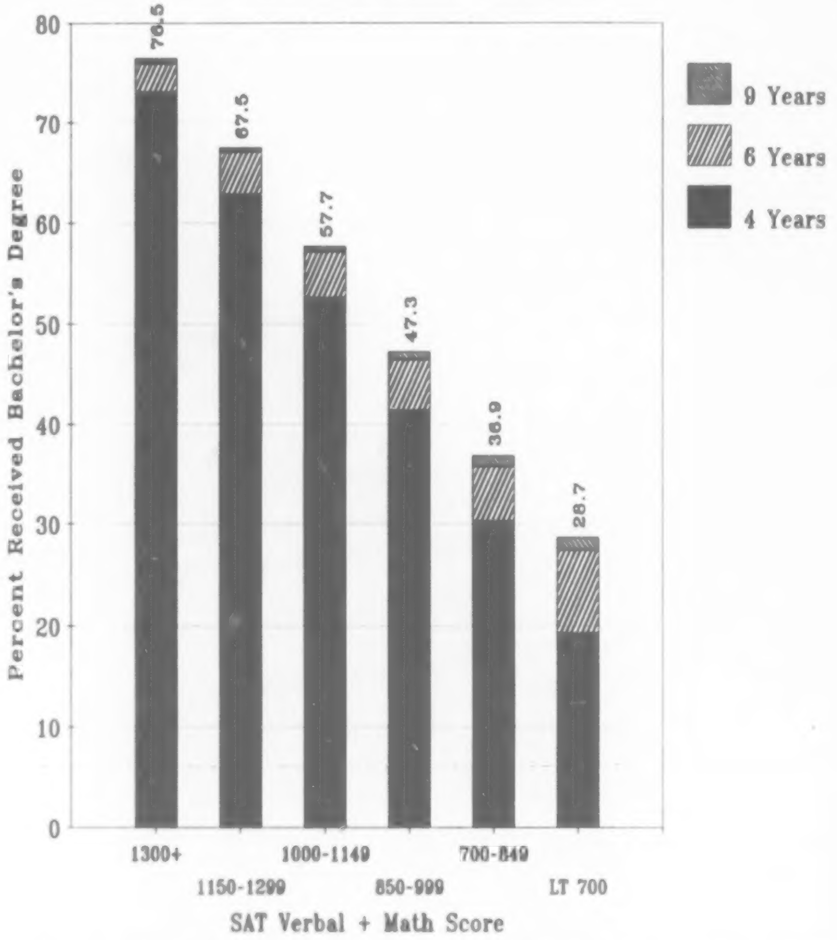
These data also highlight another important finding. Those with the best high school grades not only graduated from the college they entered at the highest rates, but they also took the least time to earn their degrees. Among those completing their bachelor's degrees in 9 years or less, the proportion completing their degrees in 4 years by high school grade averages were:

A, A+	93.6%
A-	90.2%
B+	88.5%
B	84.8%
B-	81.7%
C+	71.9%
C or less	67.2%

SAT Verbal + Math

The chart on this page shows institutional graduation rates for the 1985 cohort in terms of their Scholastic Aptitude Test verbal plus math score. The range is what one would expect, from 28.7 percent of those with SAT V+M scores of less than 700, to 76.5 percent of those with SATs of 1300 or greater.

Institutional Graduates Rates at 4-Year Institutions
by SAT Verbal + Math Score
1985 Freshman Cohort



Time to complete degree is again related to SAT V+M scores. For those who earned their bachelor's degrees in nine years or less, the proportion completing their degrees in 4 years were:

1300+	95.6%
1150-1299	93.0%
1000-1149	91.2%
850-999	87.5%
700-849	82.1%
Less than 700	67.2%

Interaction between HSG and SAT

High school grades and Scholastic Aptitude Test scores are related insofar as many students with high grades also have high test scores. But not all do, and some students have better records on one measure than the other. Thus, here the interaction between high school grades and test scores on institutional graduation rates and time-to-degree are measured.

The table on the following page crosstabs IGRs by both high school grades and SAT test scores. The extremes are in the upper right and lower left corners of the table. IGRs range from about 21 percent for those with both lowest high school grades and SAT scores, to about 83 percent of those with both highest high school grades and SAT test scores.

Moreover, the published data can be reformatted to show the proportion of bachelor's degree recipients that earn their degrees within 4 years of entry. The second table on the following page shows these data. Of those earning their degrees at the institution where they first enrolled, the range of IGRs was from 97 percent of those with SAT scores of 1300 or greater and average high school grades of A or higher, to 50 percent of those with both the lowest SAT scores and lowest average high school grades.

Conclusions

These data vividly portray the importance of precollege academic records in describing students' chances for earning baccalaureate degrees from the colleges and universities that they first enter. These data illustrate the very powerful relationships between high school grades and institutional graduation rates, between SAT V+M scores and IGRS, and the interaction between high school grades and SAT scores in explaining institutional graduation rates. Moreover, these same pre-college variables and their interactions have similar explanatory power when it comes to measuring time-to-degree.

These data illustrate the serious problem of misusing raw data on institutional graduation rates to describe anything other than the academic backgrounds of the kinds of students initially admitted.

Institutional Graduation Rates after Nine Years
by Average High School Grades and SAT V+M
1985 Freshman Cohort

Average High School Grade	SAT Verbal + Math					
	LT 700	700-849	850-999	1000-1149	1150-1299	1300/+
A, A+	43.6%	49.0%	60.1%	67.7%	74.0%	82.9%
A-	36.9%	48.6%	58.9%	62.0%	69.6%	76.2%
B+	40.0%	45.1%	52.6%	60.6%	66.8%	67.7%
B	30.1%	37.8%	45.2%	52.7%	57.4%	54.6%
B-	24.8%	31.4%	37.8%	41.4%	54.9%	48.1%
C+	26.2%	27.0%	31.3%	33.3%	37.5%	
C or less	21.0%	20.9%	23.6%	25.3%		

Degree Completion Rates in 4 Years of Those Who Graduate from Original Institution
by Average High School Grades and SAT V+M
1985 Freshman Cohort

Average High School Grade	SAT Verbal + Math					
	LT 700	700-849	850-999	1000-1149	1150-1299	1300/+
A, A+	56.8%	91.2%	92.3%	94.1%	95.8%	97.0%
A-	77.8%	85.2%	87.9%	93.2%	93.1%	95.3%
B+	72.5%	83.8%	88.4%	91.9%	93.3%	92.9%
B	69.1%	83.9%	87.2%	87.7%	89.5%	88.6%
B-	69.0%	81.5%	86.2%	84.1%	80.0%	82.3%
C+	65.6%	68.5%	78.3%	82.3%	73.9%	
C or less	50.0%	75.6%	81.8%	82.2%		

Refinancing Opportunity . . . . . . for Higher Education

The Story Told by the National Income and Product Accounts

The National Income and Product Accounts provide an insightful and useful overview of the financing of higher education in the United States. When examined over time, the NIPA tell two profoundly important stories.

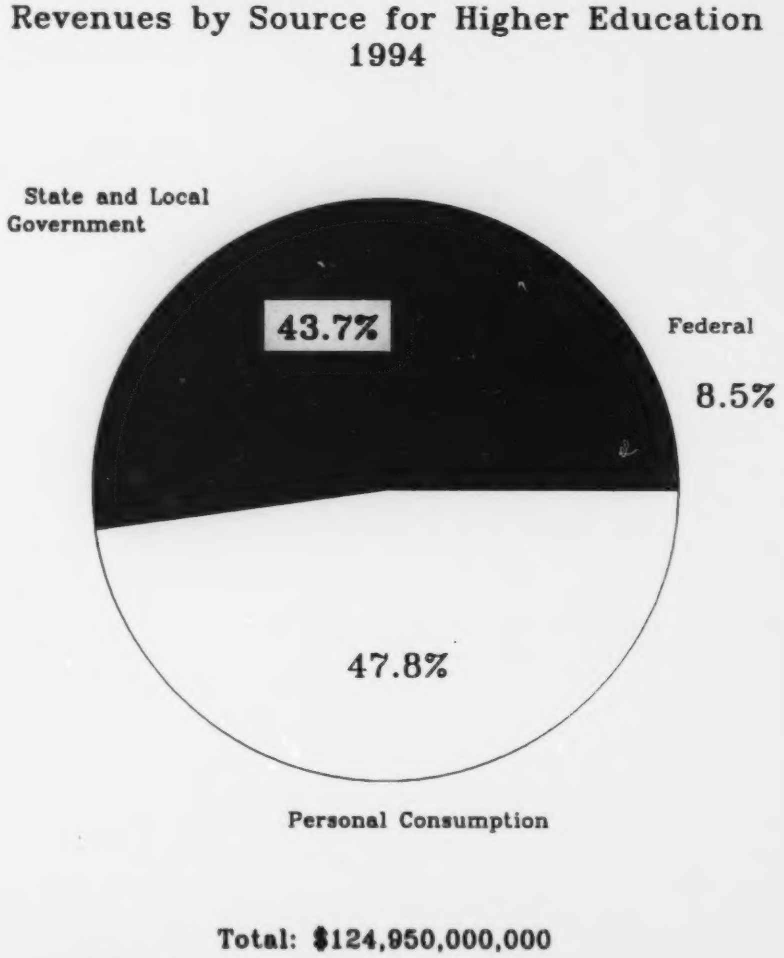
The first story relates social investment in higher education to family income:

- *Between 1952 and about 1971, the combined contributions of state and federal taxpayers and tuition-paying students more than tripled as a proportion of Gross Domestic Product.*
- *Between 1971 and 1994--the most recent year of available data--the combined efforts of these three parties have produced a nearly constant proportion GDP.*
- *The period of growth in social investment in higher education between 1952 and 1971 corresponds very closely to a period of growth in real median family incomes in the United States. The period of lack of growth in social investment in higher education since the early 1970s corresponds equally closely to a lack of growth in real median family incomes since the early 1970s.*

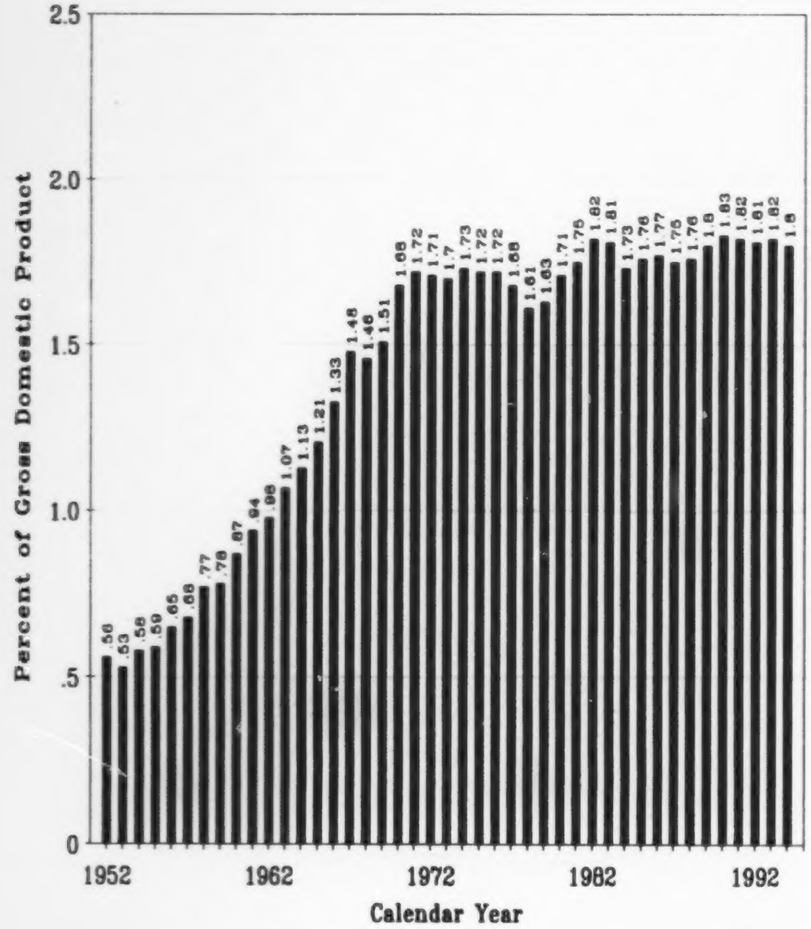
The second story describes shifting patterns of responsibility for the financing of higher education in the United States:

- *The financing of higher education is a shared responsibility between students (and their families), state taxpayers (and in some states local taxpayers) and federal taxpayers.*
- *Since the early 1950s, the respective shares of responsibilities have shifted in two broad waves. Between 1952 and 1979, the share of the costs of educating students born by taxpayers expanded, and the share born by individuals shrank.*
- *Since 1979 this has reversed. The share of total expenditures born by taxpayers has dropped significantly, while the share born by students has jumped sharply.*
- *This cost shift from taxpayers back on to students since 1979 corresponds to a period of substantial growth in inequality of higher educational opportunity for students from different family income backgrounds.*

Here we tell these two stories in terms intended to illustrate the closely intertwined relationships between social investment in higher education, the distribution of higher educational opportunity, and the creation and distribution of family welfare as measured by incomes. The implications of these two stories on



Higher Education's Share of Gross Domestic Product 1952 to 1994



our national welfare and future cannot possibly be overstated, but has been most seriously underestimated and appreciated by political leaders.

The National Income and Product Accounts

The National Income and Product Accounts is our system of measuring the total production of our country's economic system. It measures the total market value of goods and services produced for final use in a given period of time. This is called Gross National Product, and it is the sum of products available for consumption or for addition to the country's stock of capital, including human capital (education). It also measures income arising from production when allowances are made for indirect taxes.

The National Income and Product Accounts for the United States includes schedules that measure expenditures for higher education of the federal government, of state and local governments, and of individuals. These expenditures are limited to the function of educating students. Expenditures are tabulated elsewhere for other activities of higher educational institutions such as research, food service, housing, book stores, athletic and cultural events, hospitals, and extension services.

The NIPA data on higher education expenditures by the federal government, state and local governments, and by individuals, have been reported for the years since 1952, most recently for 1994. Thus, 43 years of well defined (and occasionally redefined) data are available for the study of higher education finance for nearly all of the post World War II era. These data are prepared and published by the Bureau of Economic Analysis, a part of the federal Department of Commerce. The data for the years between 1952 and 1988 were published in:

U.S. Department of Commerce. Bureau of Economic Analysis. *National Income and Product Accounts of the United States: Volume 1, 1929-58.* Washington, DC: U.S. Government Printing Office, February 1993.

U.S. Department of Commerce. Bureau of Economic Analysis. *National Income and Product Accounts of the United States: Volume 2, 1959-88.* Washington, DC: U.S. Government Printing Office, September 1992.

Subsequent updates are published from time to time in the *Survey of Current Business*. The most recent data on federal and state/local government expenditures, for 1991-944, were published in:

U.S. Department of Commerce. Bureau of Economic Analysis.

"Comprehensive NIPA Revision: Newly Available Tables." *Survey of Current Business*. Volume 76, Number 6. June 1996.

Data from the NIPA has been used in previous analyses reported in OPPORTUNITY. This analysis updates and extends previous analyses of national data reported in the February 1995 and January 1994 issues of OPPORTUNITY. In addition, OPPORTUNITY has examined and reported on the current funds expenditures of higher education as a proportion of gross state product on a state-by-state basis for the years between 1954 and 1991 in the November 1994 issue. This latter analysis will be updated and reported when new gross state product data become available from BEA.

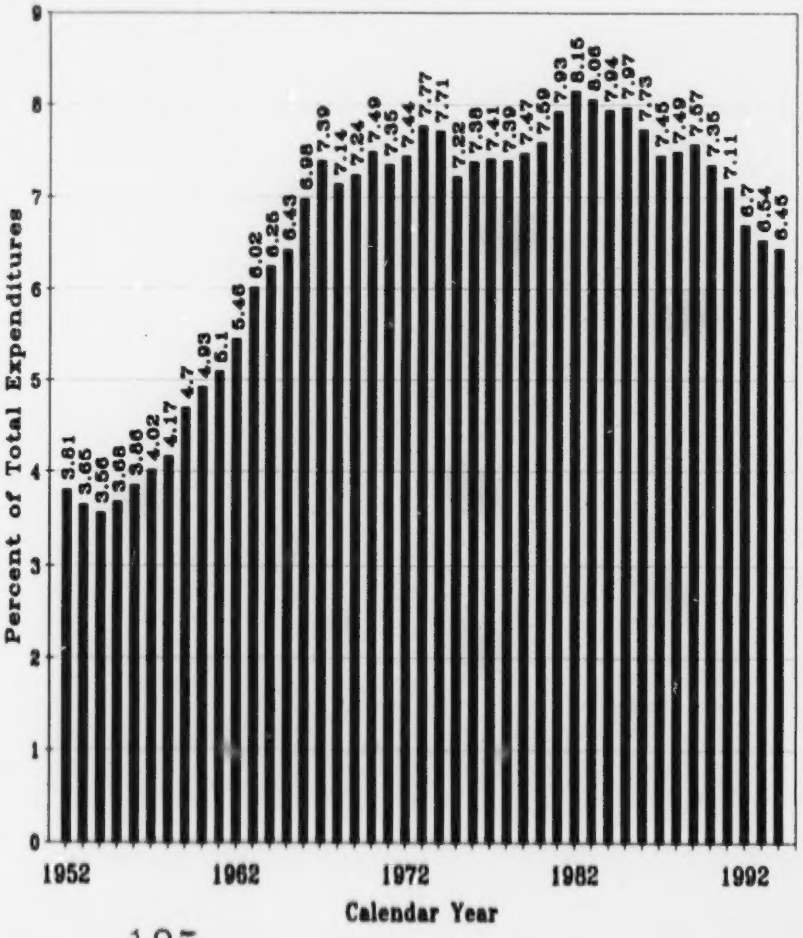
Refinancing Higher Education

In 1994 the United States spent about $124.9 billion on the higher education of students. Approximately $59.7 billion was provided by students and their families, another $54.6 billion was provided by state and local governments, and $10.6 billion was provided by the federal government. The student share was paid through tuition and fees. The state and local government share is almost entirely from states, and consists mainly of appropriations to institutions with smaller amounts for student financial aid programs. The federal government share consists almost entirely of student financial aid funding including grants to students, loan program costs, with small amounts provided for institutional support. The proportional shares are shown in the pie chart on page 5.

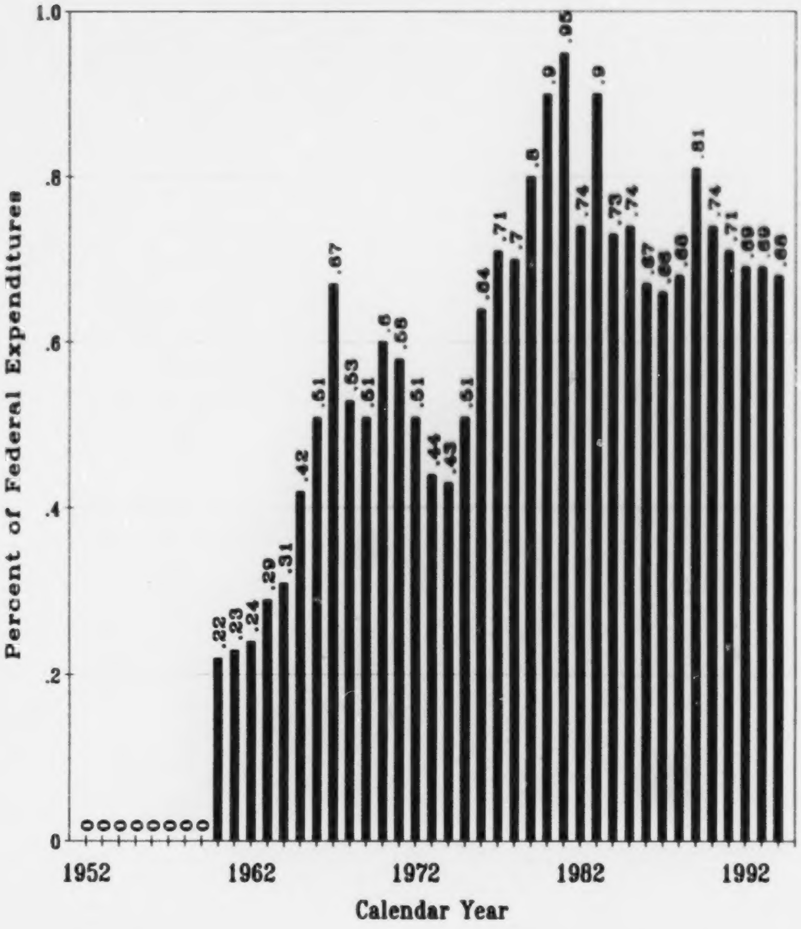
The combined efforts of these three funding sources comprised 1.80 percent of Gross Domestic Product in 1994, as shown in the chart on page 6. This chart shows higher education's share of GDP for each year between 1952 and 1994. Two distinct eras are apparent. The first era spans the years between 1972 and about 1971. During this period the combined contributions of students, states and the federal government more than tripled as a percent of GDP, from about 0.5 percent of GDP in the early 1950s to 1.72 percent in 1971. The second era spans the years between 1971 and 1994. During this period the combined efforts of students, states and the federal government held a constant portion of GDP. This combined effort fluctuated between 1.61 and 1.83 percent during this 24 year period--essentially no growth.

State and local governments. Until 1992 state and local governments provided the largest share of funds for the higher education of students. Expressed as a proportion of all expenditures of state and local governments, higher education's share of all expenditures rose from about 3.5 percent in the early 1950s, to a peak of 8.15 percent in 1982, and has since steadily dropped off to 6.45 percent in 1994. This is about the same share of state and local

Higher Education's Share of
Expenditures of State and Local Governments
1952 to 1994



Higher Education's Share of Expenditures of the Federal Government 1952 to 1994



government expenditures that higher education had in 1965.

The magnitude of the diversion of state and local government resources away from higher education can be readily calculated from the published NIPA data. In 1994 state and local governments provided $54.6 billion for higher education, or 6.45 percent of total expenditures. If state and local governments had appropriated funds at the 1982 budget share level then state and local governments would have provided $69.0 billion. The 1994 effort was about 80 percent of the 1982 level of effort.

As we have reported previously and often in these pages, states have chosen to divert state budget shares previously allocated to higher education to other state government purposes. Until quite recently these competing purposes were mainly corrections and Medicaid. In the last several years, state tax cuts have joined in displacing higher education funding among state budget priorities.

Federal government. Until 1960 federal funds were not involved in financing higher education for students, under NIPA accounting. Then federal appropriations for student financial aid appears in the National Income and Product Accounts. From 0.22 percent in 1960, the proportion of federal expenditures for mainly student financial aid increased to a peak of 0.95 percent in 1981, and has since declined to 0.68 percent in 1994. This is about the same share of federal government expenditures as occurred in 1967.

Again, we may calculate the dollar loss reflected in the percentage decline between 1981 and 1994 from the NIPA data. In 1994 the federal government spent $10.6 billion on higher education for students, or 0.68 percent of all expenditures. If higher education had occupied the 1981 share of federal expenditures, then the federal government would have spent about $15.0 billion on higher education, or about $4.4 billion more than it did in 1994. The 1994 effort was about 71 percent of the 1981 effort.

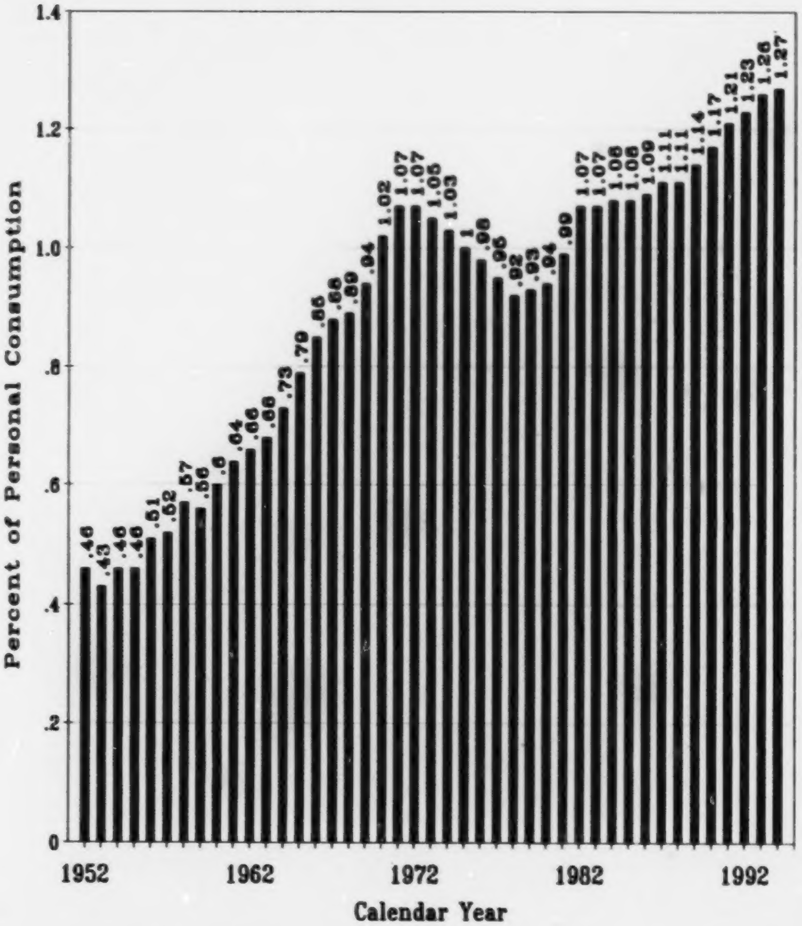
There is no secret to the federal formula of appearing to provide ever larger sums of financial aid for college students with a shrinking share of federal expenditures: the costs of federal financial aid are shifted from the federal budget to students by substituting loans for grants, and forever seeking ways of shifting the remaining costs of educational loans to those who borrow to finance their higher educations. The enrollment consequences of this budget-driven approach are largely ignored.

Students and their families. The third party in the system of shared responsibility for financing higher education is students, and their families. As shown in the chart on page 9, the proportion of personal consumption expenditures devoted to college tuition and fees stood at 1.27 percent in 1994, the highest of any year since 1952 when these data were first published. The trend is clear in this chart: by 1994 the proportion of personal consumption spent on higher education has tripled.

The dollar increase in the costs of higher education paid by students and their families since 1980 can be calculated directly from the published NIPA data. In 1994 students paid $59.7 billion in tuition and fees to higher education institutions, or 1.27 percent of personal consumption expenditures. If tuition and fee revenues had comprised the 1980 share of personal consumption of 0.94 percent, then students and their families would have paid $44.2 billion in 1994 or $15.5 billion less than they did.

This cost shift from taxpayers to students has been justified in part by the very large and growing income differential between those with college educations and those without college educations. In 1994 a male with a bachelor's degree could expect to earn about $700,000 more over a 40 year working lifetime than would a male with a high school diploma. For females the differential was about $400,000. For families, the earnings differential is about $1.2 million.

Higher Education's Share of Personal Consumption Expenditures 1952 to 1994



The cost shift from taxpayers to students. When the contributions of those who share responsibility for financing higher education are compared directly, the result is the chart shown on page 10. This chart illustrates the cost shift from taxpayers to students that has occurred since 1979. Between 1952 and 1979, the combined appropriations of federal and state/local governments decreased the share of the total provided by students and their families. The state/local share rose from 48.7 percent in 1952, to a peak of 57.7 percent in 1974, and has since declined to 43.7 percent in 1994, the lowest on record. The federal share rose from zero in 1959 to a peak of 12.3 percent in 1981, and has since dropped back to 8.5 percent in 1994. The share paid by students and their families through tuition and fee charges declined from 51.3 percent in 1952 to a low of 35.3 percent in 1979, and has since risen to 47.8 percent in 1994.

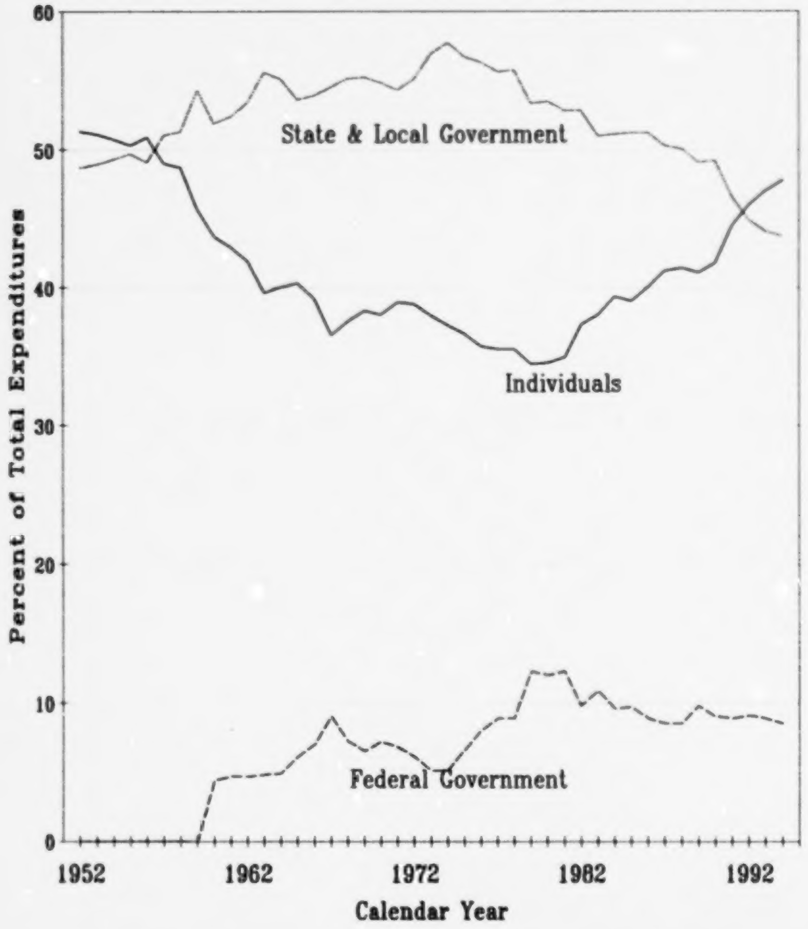
Higher Education Investment and Family Income

As shown in the chart on page 11, the combined efforts of students and their families and taxpayers to finance higher education (measured as a proportion of Gross Domestic Product) grew rapidly between 1952 and about 1971, and stopped growing as a proportion of GDP thereafter.

This pattern has a striking similarity to the post World War II pattern of median family income in the United States. Between the early 1950s and the early 1970s, both investment in higher education and median family income rose sharply, year after year.

- Higher education's share of GDP increased from about 0.55 percent

Distribution of Responsibilities for
Financing Higher Education
1952 to 1994



to 1.72 percent, an increase of 213 percent.

- Between the mid 1950s and the early 1970s, median family income increased from $26,799 (1995 dollars) to $42,950, an increase of 60 percent.

However, since the early 1970s, both higher education's share of GDP and median family income have stagnated.

- Between 1971 and 1994, higher education's share of GDP increased from 1.72 to 1.80 percent, an increase of about 5 percent.
- Between 1973 and 1995, median family income declined, from $42,950 to $41,771, a decline of 3 percent.

The causes of economic growth and stagnation are more complex than we can address here. Many issues influence economic growth, and the results of higher education investments are almost certainly lagged in their economic impacts. But in any comprehensive analysis, education is one of the measurable contributions to economic growth.

In the U.S., the relationship between family income and educational attainment is clear, and in fact has strengthened since the early 1970s.

The *stagnation* in median family income since the early 1970s obscures the *redistribution* of family income that has occurred. This redistribution is measured most directly by educational attainment: families headed by persons with the most education are prospering, while families headed by persons with the least education are suffering.

Between 1973 and 1995, median family incomes by educational attainment of the head of the household changed as follows:

8 years or less	-21.7%
1 to 3 years high school	-36.7%
High school graduate	-18.8%
1 to 3 years college	-11.2%
Bachelor's degree	-2.4%
5 years or more college	+14.7%

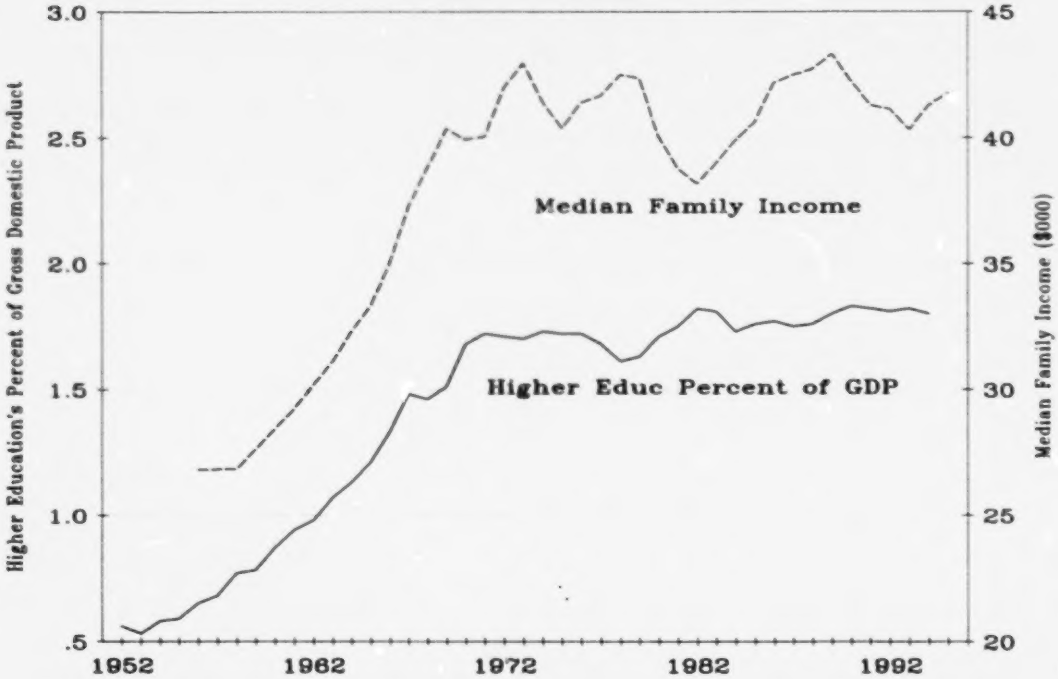
Higher Education Investment and Educational Opportunity

The rapid growth in social investment in higher education opportunity that occurred after World War II also corresponded to a rapid expansion in the proportion of the population enrolled in higher education. When the investment expansion stopped, the rate of growth in higher education enrollments slowed nearly to a stop.

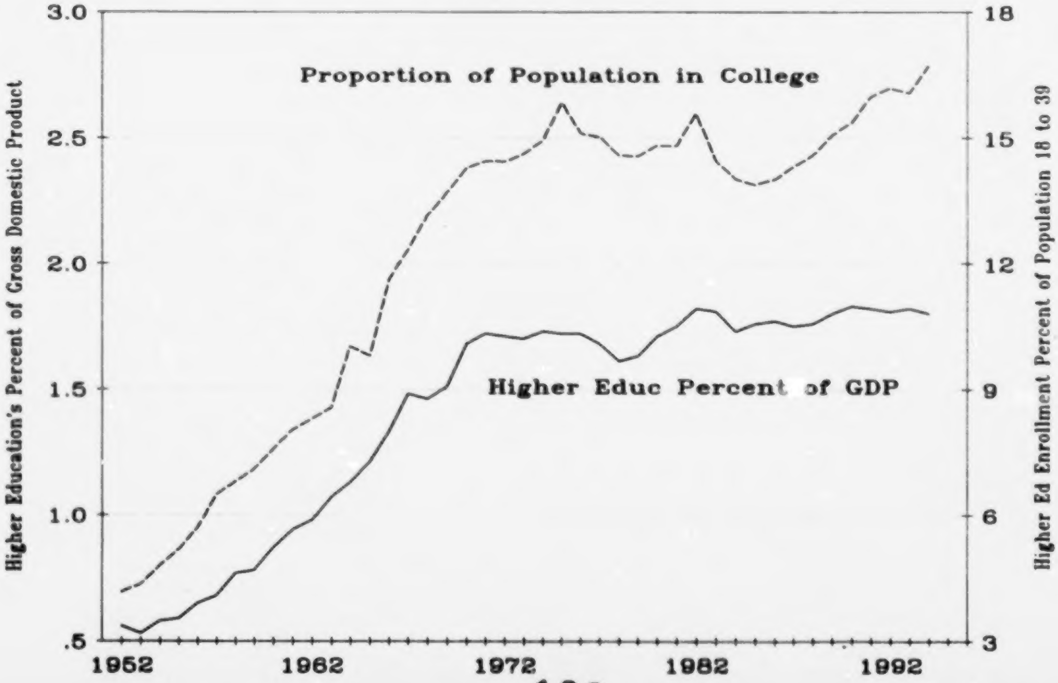
As shown in the second chart on the following page, between 1952 and 1975, the proportion of the U.S. resident population enrolled in higher education increased from 1.4 to 5.2 percent. However, after 1975, the proportion of the population enrolled in college increased much more slowly, to 5.7 percent by 1994.

Moreover, the composition of those attending and especially those completing higher education began to change. Those from highest family income levels have fared best and

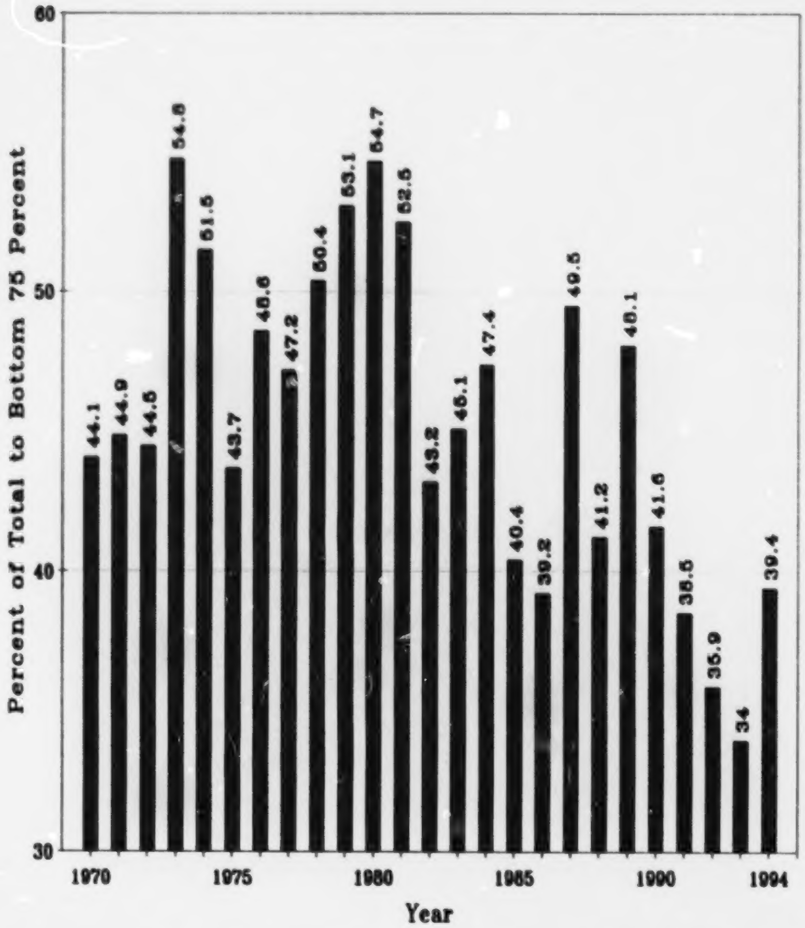
Higher Education's Share of Gross Domestic Product and Median Family Income 1952 to 1995



Higher Education's Share of Gross Domestic Product and Enrollment Share of Resident Population Age 18 to 39 Years 1952 to 1995



Proportion of Bachelor's Degrees Earned by Age 24 to Students from Bottom 75 Percent of Family Incomes 1970 to 1994



those from lowest family income levels have fared worst since the cost shift from taxpayers to students occurred about 1980.

There are many ways to measure the redistribution of educational opportunity that follows so closely from the redistribution of financing responsibility for higher education. The effects are apparent in enrollment data measuring access, choice, persistence and degree attainment. Several of these effects have been reported in past issues of OPPORTUNITY.

The enrollment redistributional effects of the cost shift from taxpayers to students may be explained clearly, directly and accurately in terms of economics. The basic micro-economic principle is that student enrollment decisions are influenced by cost. If all other conditions are held constant, increasing the price charged students will decrease student demand for higher education, while decreasing the price charged students (such as through student financial aid) will increase the numbers of students enrolled.

The cost shift of $15.5 billion from taxpayers to students that has occurred between 1979 and 1994 has had predictable consequences for the distribution of opportunity for higher education. The chart on this page shows our estimate of the proportion of bachelor's degrees awarded to students by age 24 (we do not know what happens after age 24) from the bottom three-quarters of the family income distribution. In 1994 this corresponded to students from families with incomes below about $68,000. This is very roughly the financial aid-dependent population and the population most sensitive to the cost-shift from taxpayers to students.

Between 1970 and 1980 the proportion of bachelor's degrees awarded to students from the bottom 75 percent of the income distribution increased from 44 to 55 percent. The 1970s correspond to the era of greatly expanded federal commitment to financial aid targeted on truly needy students. Between 1980 and 1994 the proportion of bachelors degrees awarded to students from the bottom 75 percent of the family income distribution dropped from 55 to 39 percent. This period corresponds directly to the period of state and federal cost-shifting from taxpayers to students. And as this chart illustrates so clearly, the consequences of the enrollment shift were borne mainly by students from families with incomes in the bottom three-quartiles of the family income distribution.

The National Income and Product Accounts tell two important stories about the financing--and refinancing--of opportunity for higher education between 1952 and 1994. Both of these stories conclude with unsettling endings. One story is how inadequate funding constrains how many may enroll, and the other story is about who participates and benefits. The level and sources of funding for higher education influence both outcomes.

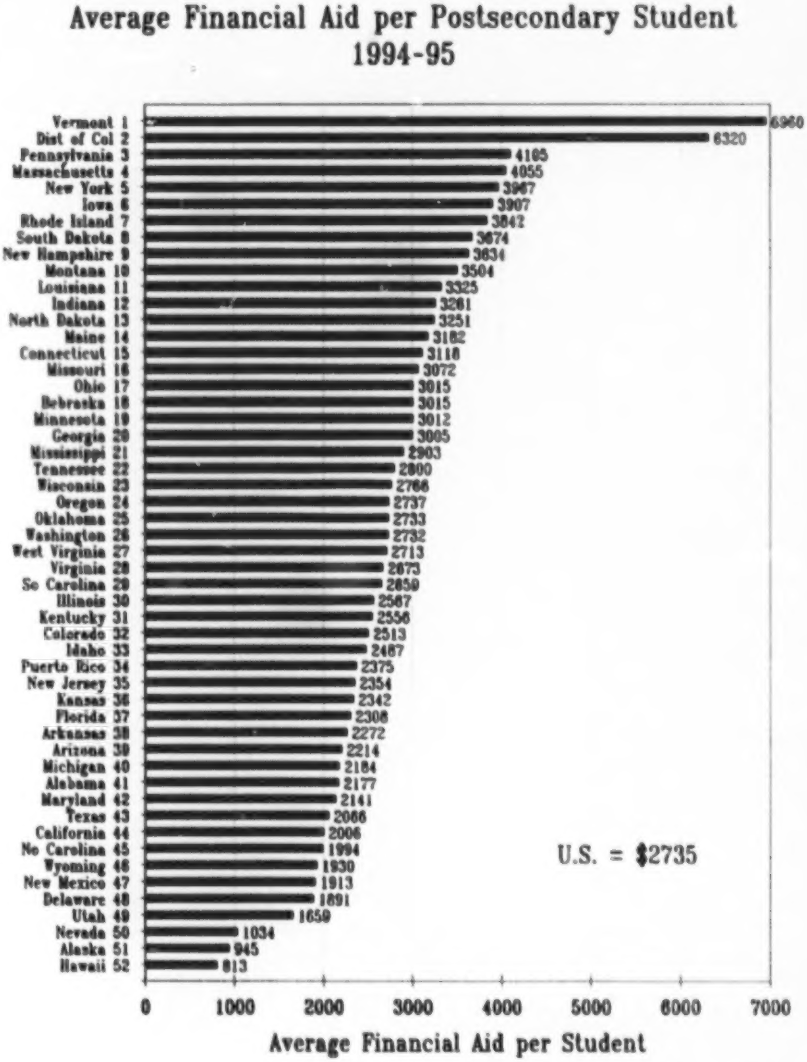
Federal, State, Private and Institutional Financial Aid by State 1994-95

For the 1994-95 academic year, students enrolled in postsecondary education in the United States received $40,799,450,000 in generally-available financial aid to help pay their college attendance costs. This aid came in the form of loans, grants, scholarships and earnings from work-study programs. It amounted to an average of $2735 for every student enrolled in a postsecondary institution during 1994-95.

Another way of thinking about the size of the student financial aid system in the United States is to compare financial aid to state appropriations. For 1994-95 states appropriated $42.9 billion in state tax fund appropriations. Student financial aid--at $40.8 billion--was 95 percent of the total tax effort made by states in support of opportunity for higher education.

Because the stunning magnitude of the student financial aid system may not always be well understood or appreciated at the state level, we have updated and extended earlier efforts by the College Board and by the National Institute of Independent Colleges and Universities to compile and report on the nation's student financial aid system. The College Board's efforts began in 1983 with a compilation of gross amounts of student financial aid. This effort has been subsequently updated on an annual basis and the most recent annual versions appear under the title *Trends in Student Aid*. The recent NAICU effort looked at federal student aid by state.

Our effort here compiles more data on a state basis by adding in state funded student aid programs, as well as institutional, private and local government funding of student financial aid.



We have also summarized four analyses in chart form to help place states in comparative perspective. These analyses produce the following highlights:

- Total student aid divided by total postsecondary enrollments produces an average of $2735 per student, with a range of from $813 in **Hawaii** to $6960 in **Vermont**.
- Federal aid as a proportion of all student aid is 73.4 percent, with a range of federal dependency from 58.1 percent of student aid provided by through federal programs in **Massachusetts** to 95.3 percent in **Puerto Rico**.
- Educational loans--all federal--are

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56.0 percent of all financial aid, with a range of from 25.9 percent in **Puerto Rico** to 71.9 percent in **Arizona**.

- Student financial aid funds are 94.9% of state tax funds for higher education for the country as a whole, but they range from 13.7 percent in **Hawaii** to 464.5 percent in **Vermont**.

This extraordinary diversity across states in the role of financial aid in helping financially needy students pay for their higher educations is why state-level disaggregation of total financial aid data is so important.

Financing higher education, unlike almost any other area of government activity, is a *shared responsibility*. Even student financial aid is a shared responsibility, with the majority of student aid provided in the form of loans from private capital sources under federal guidelines and security to be repaid after leaving college by the students and his or her family. The danger in this system of shared responsibility is, of course, that one party will try to shift their share of the load to another party in the belief that someone else can always bear the load if they choose not to. Since states have been the primary culprits in this responsibility-shirking, these data on financial aid at the state level may help add understanding of the vital importance of financial aid in securing educational opportunity.

The Data

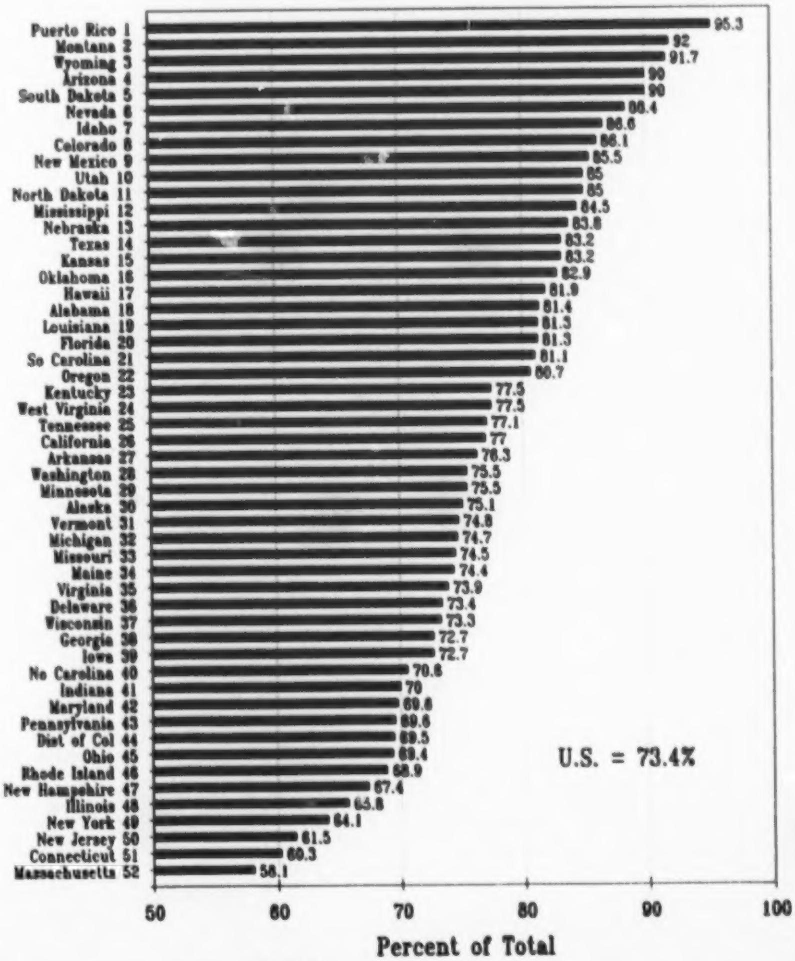
The body of this report is in the three tables that follow. These tables consist of dollars awarded, number of recipients for the discreet federal programs, and average awards for these discreet programs. These programs include all generally-available student aid, including grants, educational loans, scholarships and earnings from work-study. The federal and state data are for the 1994-95 academic year. The most recent data for local government, private and institutional funds are from the 1993-94 academic year.

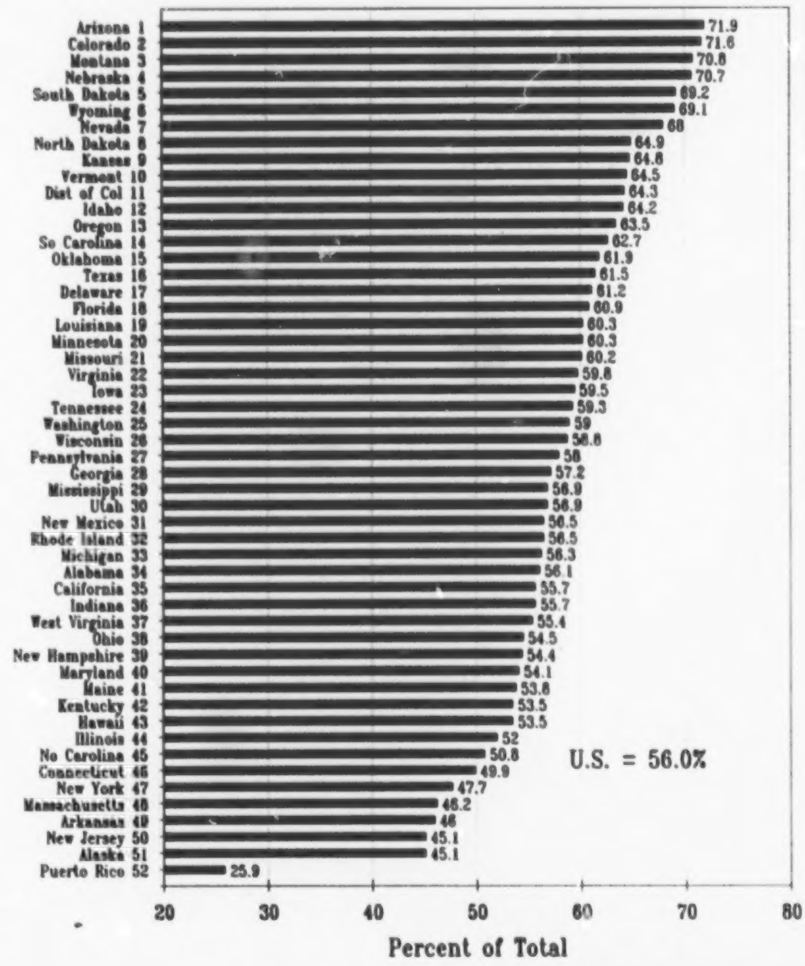
The federal data comes from a variety of published and unpublished reports that compile program data on a state-by-state basis. U.S. Department of Education staff that provided copies of these reports were Steve Carter, Maria Rojtman, Tony Oliveto, Sam Barbett, Patricia Brown and Vance Grant. Sam also provided a special tabulation from the IPEDS file on financial aid provided by local governments, private sources and institutional sources. The data in the following three tables could not have been compiled without their assistance and we are very grateful to them for their special efforts.

The Analyses

The chart on page 13 shows total financial aid per postsecondary student. Postsecondary students here include both higher educational enrollments plus Pell recipients in proprietary schools since we do not have comprehensive postsecondary enrollment data by state.

Federal Aid as a Proportion of All Financial Aid
1994-95





Educational Loans as a Proportion of All Financial Aid
1994-95

This chart illustrates the extraordinary range across states in the use of financial aid to help students and their families finance higher education. The range is from $813 per student in Hawaii to $6960 in Vermont--a range of more than 8:1. The average is $2735. Many factors influence this wide range, including the distribution of public/private institutions, postbaccalaureate enrollments in universities, state support for public higher education, state personal income and poverty rates, and other factors.

The chart on page 14 shows each state's reliance on federal student financial aid programs. On average for all states, 73.4 percent of financial aid is provided through federal programs. Across states the range is from 58.1 percent in **Massachusetts** to 95.3 percent in **Puerto Rico**. Generally states with the highest reliance on federal student financial aid are states with low per capita personal income, small state student aid programs and few private institutions. States with lowest dependence on federal student financial aid programs have large state student aid programs, and large institutional and private donor financial aid resources.

The chart on this page shows the proportion of financial aid available to students in the states in the form of educational loans, all provided through federal programs. Nationally, 56.0 percent of all financial aid is in the form of loans. But between states this ranges from as little as 25.9 percent in **Puerto Rico** to as much as 71.9 percent in **Arizona**. Nearly all of the states near the top of the list lie between the Mississippi River and the Rocky Mountains. Most of these western states offer relatively little in the way of state grant programs. Near the bottom of the list are the states that offer substantial grant assistance to their students which keeps them at least partly out of the loan programs.

The fourth chart in our analysis on the last page of this newsletter compares state tax fund appropriations for higher education to the amount of financial aid used by students in postsecondary institutions in those states. While states provided $42.9 billion, financial aid received by students totalled $40.7 billion, a roughly similar amount. Across all states financial aid averaged 95 percent of state appropriations.

However, the range in this ratio across states was simply extraordinary: from just 13.7 percent in **Hawaii**, to 464.5 percent in **Vermont**. In Hawaii financial aid was an almost trivial part of the higher education finance picture in 1994-95, although that may be changing as economic recession has forced a reassessment of how generous the state can afford to be in supporting higher education. In Vermont long term erosion of state financial support for higher education combined with economic recession and other state budget priorities have made financial aid play a greater role in financing higher education than in any other state.

Federal, State, Private, And Institutional Student Financial Aid By State, 1994-95

A. Dollars Awarded (Millions)

State	Pell (a)	SEOG (b)	CWS (c)	Perkins (d)	SSIG (e)	Direct Loans (f)			FFELP (g)			State/Loc Govt (h)	Private (i)	Institut.(i)	Total
						Subsidized	Unsub	PLUS	Subsidized	Unsb/SLS	PLUS				
Alabama	$104.22	$9.84	$11.13	$10.43	$1.08	$20.50	$9.50	$0.40	$166.00	$64.00	$15.60	$13.22	$11.23	$70.02	$507.16
Alaska	6.27	0.85	1.06	0.14	0.12	0.00	0.00	0.00	8.20	3.70	0.40	2.20	0.65	4.02	27.61
Arizona	98.19	10.32	7.93	8.72	1.22	2.60	2.70	0.20	251.90	166.60	32.40	5.06	16.91	42.63	647.38
Arkansas	55.18	4.47	7.11	6.56	0.46	2.60	0.80	0.00	54.90	28.90	8.50	9.81	7.57	35.29	222.14
California	631.66	73.91	71.69	94.88	11.17	29.50	13.30	5.30	1222.30	675.70	116.70	236.39	96.25	551.33	3830.08
Colorado	70.97	10.47	8.49	17.43	0.99	87.40	35.80	21.40	172.60	96.80	16.50	33.11	7.22	46.66	625.84
Conneticut	34.10	9.08	9.75	13.43	0.89	2.10	1.40	0.50	140.60	74.80	25.70	20.94	17.98	167.07	518.34
Delaware	7.55	1.58	1.10	2.08	0.19	0.30	0.40	0.00	27.30	15.70	5.30	1.49	1.27	19.55	83.81
D.C.	14.33	5.51	6.38	7.71	0.45	28.00	17.30	4.90	137.80	111.00	18.60	1.55	7.29	145.50	506.31
Florida	259.17	26.34	21.64	22.15	2.25	71.60	33.80	8.70	485.90	262.90	53.90	99.52	28.73	158.98	1535.58
Georgia	122.03	13.84	14.03	13.01	1.26	21.00	10.00	0.40	292.80	173.40	34.00	116.56	26.16	118.56	957.05
Hawaii	10.46	2.23	1.46	2.45	0.28	0.00	0.00	0.00	16.60	8.00	1.60	0.73	2.86	5.93	52.61
Idaho	29.53	2.08	2.31	4.04	0.24	17.90	7.80	0.50	49.80	16.20	1.80	1.07	2.97	16.48	152.72
Illinois	198.84	31.44	29.39	42.44	3.93	64.40	19.90	12.00	523.70	288.40	44.70	270.47	32.03	353.29	1914.93
Indiana	100.47	15.77	15.00	27.49	1.45	2.40	0.80	0.50	322.30	135.00	67.20	68.16	42.47	184.70	983.71
Iowa	67.26	13.35	13.78	20.65	0.78	48.10	11.40	4.50	202.30	93.50	22.20	36.18	16.14	134.81	684.96
Kansas	59.50	6.68	7.04	12.99	0.81	0.60	0.20	0.00	171.20	67.30	11.40	12.60	12.64	43.15	406.10
Kentucky	90.83	8.35	15.45	11.97	0.89	0.80	0.60	0.00	162.10	73.90	8.60	25.52	10.75	72.36	482.11
Louisiana	127.16	9.11	11.24	12.93	1.02	1.20	0.50	0.50	270.90	119.70	18.60	13.11	8.40	109.87	704.23
Maine	20.32	9.28	7.56	10.51	0.26	0.80	0.40	0.00	59.40	21.90	8.40	7.09	3.56	37.06	186.54
Maryland	71.58	10.22	10.32	13.70	1.32	5.90	3.10	2.90	172.50	86.60	29.70	32.53	11.43	132.69	584.48
Massachusetts	110.68	39.60	50.71	51.31	2.34	22.80	6.90	6.20	488.70	139.00	74.00	61.95	40.46	613.53	1708.17
Michigan	179.82	28.24	22.63	37.16	3.00	90.40	51.70	12.40	315.90	152.00	25.40	86.04	35.67	190.08	1230.44
Minnesota	93.22	20.14	19.10	23.59	1.41	13.80	5.70	0.90	319.50	142.20	28.20	98.16	24.97	94.17	885.05
Mississippi	80.56	7.93	9.88	8.43	0.61	0.40	0.10	0.10	135.20	52.60	6.90	1.36	7.79	46.38	358.24
Missouri	105.88	14.13	15.90	23.58	1.43	4.10	1.20	0.00	337.40	167.90	24.20	23.18	20.69	194.57	934.15
Montana	24.73	2.12	3.30	4.00	0.20	5.40	2.70	0.60	60.00	25.20	3.50	0.42	3.59	7.40	143.15
Nebraska	36.45	4.78	4.95	9.39	0.52	0.50	0.20	0.20	155.10	74.20	12.10	3.22	10.35	44.03	355.99
Nevada	11.50	1.32	0.93	1.17	0.20	0.00	0.00	0.00	26.20	17.10	2.20	0.40	1.53	6.05	68.59
New Hamp.	16.97	6.81	6.73	9.07	0.25	0.00	0.00	0.00	66.40	32.50	16.80	1.55	5.06	68.70	230.84
New Jersey	105.16	14.50	12.71	19.15	1.91	85.40	44.20	7.60	142.80	52.10	18.60	170.16	10.95	134.06	819.29
New Mexico	46.69	4.57	7.45	6.53	0.37	1.30	0.30	0.00	71.00	29.90	1.80	14.85	6.36	7.71	198.81
New York	538.25	73.94	72.26	84.31	6.14	78.20	36.60	8.90	1145.90	614.20	149.70	658.64	68.66	848.77	4384.48
North Carolina	113.76	16.49	14.62	23.12	1.53	2.10	1.00	1.10	212.70	102.40	34.30	46.44	34.42	137.49	741.46
North Dakota	20.55	3.46	3.01	5.97	0.19	1.60	1.00	0.30	56.30	16.80	3.90	2.33	4.42	13.27	133.10
Ohio	208.47	31.25	29.59	44.60	2.88	39.60	16.10	8.00	576.10	157.60	73.20	125.37	35.02	362.11	1709.89
Oklahoma	93.81	8.06	9.11	13.93	0.98	25.00	10.40	4.10	171.40	82.70	14.20	18.21	13.92	57.08	522.90
Oregon	54.09	11.35	12.16	19.97	0.93	27.70	10.40	2.90	135.70	81.10	13.10	13.93	14.46	60.23	458.03
Pennsylvania	213.04	45.10	42.14	55.37	3.21	7.70	3.60	1.60	907.20	417.80	129.90	223.14	54.36	520.87	2625.02
Puerto Rico	298.07	10.79	13.68	6.17	0.64	44.80	2.50	0.00	60.80	6.20	0.00	22.07	0.00	0.00	465.72
Rhode Island	23.26	7.45	6.66	10.13	0.38	14.40	3.90	4.70	76.70	31.50	24.60	6.34	2.81	82.83	295.66
South Carolina	68.16	8.57	9.03	8.85	0.79	10.10	4.50	3.10	163.00	86.80	18.80	17.38	13.24	58.60	470.93
South Dakota	21.59	3.95	4.35	6.47	0.21	0.30	0.10	0.00	63.70	24.10	5.50	1.13	3.50	9.92	144.81

Tennessee	98.94	13.10	11.51	16.09	1.18	22.00	9.20	0.50	236.60	105.20	25.60	19.17	15.20	126.24	700.53
Texas	358.35	33.90	37.89	29.25	3.96	12.60	4.10	0.80	751.60	400.10	63.30	33.53	81.08	226.75	2037.21
Utah	59.34	4.89	4.16	9.38	0.54	0.00	0.00	0.00	95.30	31.30	5.40	3.69	8.34	25.02	247.36
Vermont	11.73	6.49	6.22	6.83	0.18	12.70	4.30	5.10	82.60	32.90	15.80	11.98	2.36	48.04	247.23
Virginia	103.99	14.40	14.95	18.61	1.55	23.60	14.00	1.70	322.00	156.40	53.10	83.61	25.50	146.11	979.50
Washington	95.95	15.63	14.29	23.29	1.65	57.30	23.50	5.20	207.20	128.00	28.40	54.21	36.37	104.25	795.24
West Virginia	42.78	5.67	5.85	8.13	0.53	31.50	10.80	4.50	53.80	23.00	5.90	15.85	5.26	34.89	248.45
Wisconsin	83.66	20.30	15.99	29.51	1.52	2.40	0.60	0.50	305.20	131.70	28.80	60.82	21.04	143.83	845.86
Wyoming	11.66	1.11	0.87	1.95	0.11	0.00	0.00	0.00	23.60	10.70	5.90	1.06	1.83	2.19	60.98
All Others	8.74	0.24	0.79	0.00	0.04	0.00	0.00	0.00	61.60	65.70	1.60	0.00	0.00	0.00	138.71
TOTALS	**5519.45**	**754.99**	**757.25**	**970.93**	**72.38**	**1045.40**	**439.30**	**143.70**	**12738.30**	**6174.90**	**1456.50**	**2887.50**	**973.72**	**6865.12**	**40799.45**

B. Students Served

State	Pell	SEOG	CWS	Perkins	SSIG	Direct Loans			FFELP		
						Subsidized	Unsub	PLUS	Subsidized	Unsub/SLS	PLUS
Alabama	72695	13804	9892	6194	5895	4200	0	100	46200	18000	3100
Alaska	4218	1191	552	116	168	0	1800	0	2200	1000	100
Arizona	66679	16246	5549	4717	3798	600	0	0	87500	41300	5900
Arkansas	35872	8322	7011	4026	8096	600	600	0	25300	8400	1600
California	395583	110430	50039	61707	12174	6600	2800	900	276200	135600	19800
Colorado	49236	12066	6474	12560	2747	15200	9700	2700	47200	24200	3100
Conneticut	24659	10516	8684	7603	2847	800	500	100	34200	17100	3500
Delaware	5610	3019	1182	1482	579	100	2600	0	6400	3400	700
D.C.	9718	3841	4358	3992	1115	4200	100	500	23200	15100	2100
Florida	173664	43536	17863	16677	38859	17300	0	1200	129000	61900	8900
Georgia	90767	19273	13746	8185	10621	5100	2500	0	76300	40300	6200
Hawaii	7030	2019	894	1145	816	0	0	0	5000	2400	400
Idaho	19329	4693	2336	3895	1891	4100	4200	100	13800	4900	300
Illinois	137180	34866	26900	25104	127204	15500	2300	1900	127300	57300	8200
Indiana	70913	25558	15414	18538	18651	700	5500	100	92000	40200	11900
Iowa	47450	15511	14966	16350	25459	12900	200	1100	55300	24100	5000
Kansas	41421	12491	7479	8868	8346	300	100	0	46900	20100	2500
Kentucky	59721	14708	11621	8296	1881	300	300	0	47200	22000	1900
Louisiana	78984	12556	10625	7193	3620	400	100	100	74700	30200	3800
Maine	13967	10740	6987	7677	10360	300	1300	0	15300	6100	1400
Maryland	50533	17467	8921	8233	9111	1600	900	500	42300	21200	4400
Massachusetts	75249	39014	38408	34442	30878	5000	100	600	106000	43000	9900
Michigan	127002	43978	21773	28360	5907	21200	12300	1700	94400	42700	5300
Minnesota	67769	23479	18269	15542	70291	3700	1700	200	92500	38200	5400
Mississippi	50219	11060	10178	5234	1889	100	400	0	40400	15800	1600
Missouri	73832	21183	14217	15750	9150	1500	0	0	82400	37200	4700
Montana	15999	3552	3127	3589	981	1700	900	100	17900	8500	700
Nebraska	26822	10208	5698	7411	3750	200	300	0	44400	21100	2700
Nevada	8356	1759	488	552	622	0	300	0	7800	4900	400
New Hamp	12085	9041	7481	5900	1537	0	100	0	23200	8500	2500
New Jersey	69383	22999	12909	12666	12848	19200	0	1300	42000	22800	3600
New Mexico	30899	6676	4561	5158	11209	500	0	0	21400	9500	400

New York	338665	82614	66882	57402	5466	18000	9700	1100	268100	124800	21800
North Carolina	78778	22657	18016	13132	4298	600	100	200	59500	27100	5800
North Dakota	13744	5370	3349	4982	3540	500	7600	100	18300	5400	1000
Ohio	145078	44589	29393	35730	65346	10400	4900	1300	150400	55200	13300
Oklahoma	62116	12805	8512	8467	19068	6200	3400	900	53500	24800	2900
Oregon	37133	18789	11216	14220	14456	6400	2800	400	35700	19600	2400
Pennsylvania	143339	50508	45126	46796	2838	2000	1000	200	233400	105300	21400
Puerto Rico	165490	34007	25673	10415	55297	11800	500	0	16300	900	0
Rhode Island	16415	8400	6364	6641	13924	3200	700	400	20900	8500	3500
South Carolina	48679	14315	9545	5690	6113	2500	1200	500	44400	20900	3700
South Dakota	14805	7334	4531	4937		100	0	0	19400	8100	1400
Tennessee	66596	17511	11563	9491	21858	5000	2600	100	63400	25300	4400
Texas	244165	56614	31144	17461	7939	3300	1100	200	193800	94700	11700
Utah	42144	9874	2549	5101	2406	0	0	0	27100	8700	900
Vermont	8569	5136	5851	6001	4461	3000	3600	600	19400	7700	3000
Virginia	72772	20987	14442	11188	8148	5500	1200	300	82400	39700	8900
Washington	63844	21714	11570	13760	10864	10800	4800	1000	50400	29100	4700
West Virginia	27255	6928	6452	5610	730	7800	200	800	17400	7500	1300
Wisconsin	59109	27926	17759	17561	5236	600	3200	100	90900	38500	6100
Wyoming	7935	1820	992	1600	583	0	0	0	8300	3900	1000
All Others	5502	860	1274	0	153	0	8600	0	7300	6300	100
TOTALS	**3674977**	**1056560**	**700805**	**663347**	**696024**	**241600**	**108800**	**21400**	**3326200**	**1509000**	**251300**

C. Average Award

State	Pell	SEOG	CWS	Perkins	SSIG	Direct Loans			FFELP		
						Subsidized	Unsub	PLUS	Subsidized	Unsub/SLS	PLUS
Alabama	$1,434	$713	$1,125	$1,684	$183	$4,881	ERR	$4,000	$3,593	$3,556	$5,032
Alaska	1,486	717	1,928	1,207	685	0	0	0	3,727	3,700	4,000
Arizona	1,473	635	1,428	1,849	321	4,333	0	0	2,879	4,034	5,492
Arkansas	1,538	537	1,014	1,628	57	4,333	1333	0	2,170	3,440	5,313
California	1,597	669	1,433	1,538	917	4,470	4750	5,889	4,425	4,983	5,894
Colorado	1,441	868	1,311	1,388	360	5,750	3691	7,926	3,657	4,000	5,323
Conneticut	1,383	864	1,123	1,766	311	2,625	2800	5,000	4,111	4,374	7,343
Delaware	1,346	522	932	1,403	333	3,000	154	0	4,266	4,618	7,571
D.C.	1,475	1,434	1,463	1,930	403	6,667	173000	9,800	5,940	7,351	8,857
Florida	1,492	605	1,212	1,328	58	4,139	0	7,250	3,767	4,247	6,056
Georgia	1,344	718	1,021	1,590	118	4,118	4000	0	3,837	4,303	5,484
Hawaii	1,488	1,105	1,634	2,141	348	0	0	0	3,320	3,333	4,000
Idaho	1,528	443	988	1,036	128	4,366	1857	5,000	3,609	3,306	6,000
Illinois	1,449	902	1,093	1,690	31	4,155	8652	6,316	4,114	5,033	5,451
Indiana	1,417	617	973	1,483	78	3,429	145	5,000	3,503	3,358	5,647
Iowa	1,418	861	921	1,263	31	3,729	57000	4,091	3,658	3,880	4,440
Kansas	1,436	535	941	1,465	96	2,000	2000	0	3,650	3,348	4,560
Kentucky	1,521	568	1,329	1,443	472	2,667	2000	0	3,434	3,359	4,526
Louisiana	1,610	725	1,058	1,797	282	3,000	5000	5,000	3,627	3,964	4,895
Maine	1,455	864	1,082	1,369	25	2,667	308	0	3,882	3,590	6,000
Maryland	1,417	585	1,156	1,664	145	3,688	3444	5,800	4,078	4,085	6,750

Massachusetts	1,471	1,015	1,320	1,490	7[illegible]	4,560	69000	10,333	4,610	3,233	7,475
Michigan	1,416	642	1,039	1,310	508	4,264	4203	7,294	3,346	3,560	4,792
Minnesota	1,375	858	1,046	1,518	20	3,730	3353	4,500	3,454	3,723	5,222
Mississippi	1,604	717	971	1,610	324	4,000	250	0	3,347	3,329	4,313
Missouri	1,434	667	1,118	1,497	156	2,733	0	0	4,095	4,513	5,149
Montana	1,546	597	1,055	1,113	203	3,176	3000	6,000	3,352	2,965	5,000
Nebraska	1,359	469	868	1,266	139	2,500	667	0	3,493	3,517	4,481
Nevada	1,377	749	1,904	2,111	317	0	0	0	3,359	3,490	5,500
New Hamp	1,404	753	899	1,537	164	0	0	0	2,862	3,824	6,720
New Jersey	1,516	631	985	1,512	148	4,448	0	5,846	3,400	2,285	5,167
New Mexico	1,511	684	1,633	1,265	33	2,600	0	0	3,318	3,147	4,500
New York	1,589	895	1,080	1,469	1,124	4,344	3773	8,091	4,274	4,921	6,867
North Carolina	1,444	728	812	1,760	357	3,500	10000	5,500	3,575	3,779	5,914
North Dakota	1,495	644	898	1,199	55	3,200	132	3,000	3,077	3,111	3,900
Ohio	1,437	701	1,007	1,248	44	3,808	3286	6,154	3,830	2,855	5,504
Oklahoma	1,510	629	1,070	1,645	51	4,032	3059	4,556	3,204	3,335	4,897
Oregon	1,510	604	1,085	1,404	64	4,328	3714	7,250	3,801	4,138	5,458
Pennsylvania	1,457	893	934	1,183	1,130	3,850	3600	8,000	3,887	3,968	6,070
Puerto Rico	1,801	317	533	593	12	3,797	5000	0	3,730	6,889	0
Rhode Island	1,417	887	1,047	1,525	27	4,500	5571	11,750	3,670	3,706	7,029
South Carolina	1,400	599	946	1,556	129	4,040	3750	6,200	3,671	4,153	5,081
South Dakota	1,458	538	959	1,311	0	3,000	0	0	3,284	2,975	3,929
Tennessee	1,486	748	996	1,695	54	4,400	3538	5,000	3,732	4,158	5,818
Texas	1,468	599	1,217	1,675	499	3,818	3727	4,000	3,878	4,225	5,410
Utah	1,408	495	1,632	1,838	223	0	0	0	3,517	3,598	6,000
Vermont	1,369	1,263	1,063	1,138	41	4,233	1194	8,500	4,258	4,273	5,267
Virginia	1,429	686	1,035	1,663	190	4,291	11667	5,667	3,908	3,940	5,966
Washington	1,503	720	1,235	1,692	152	5,306	4896	5,200	4,111	4,399	6,043
West Virginia	1,569	819	907	1,449	722	4,038	54000	5,625	3,092	3,067	4,538
Wisconsin	1,415	727	900	1,680	289	4,000	188	5,000	3,358	3,421	4,721
Wyoming	1,470	607	873	1,221	189	0	0	0	2,843	2,744	5,900
All Others	1,589	279	621	0	229	0	0	0	8,438	10,429	16,000
TOTALS	**1,502**	**715**	**1,081**	**1,464**	**104**	**4,327**	**4038**	**6,715**	**3,830**	**4,092**	**5,796**

Sources and notes

a. U.S. Department of Education, 1994-95 Federal Pell Grant Program Year End Report, pg. 140-42.

b. U.S. Department of Education, Data Book 1996, Federal Campus Based Programs, chapter 3 pg. 8.

c. U.S. Department of Education, Data Book 1996, Federal Campus Based Programs, chapter 3 pg. 10.

d. U.S. Department of Education, Data Book, 1996, Federal Campus Based Programs, chapter 3 pg. 12.

e. National Association of State Student Grant And Aid Programs, 26th Annual Survey, 1994-95, pg. 4.

f. U.S. Department of Education, Office of Postsecondary Education
(Some states unsubsidized and PLUS average awards have been set at zero due to rounded recipient numbers)

g. U.S. Department of Education, Office of Postsecondary Education

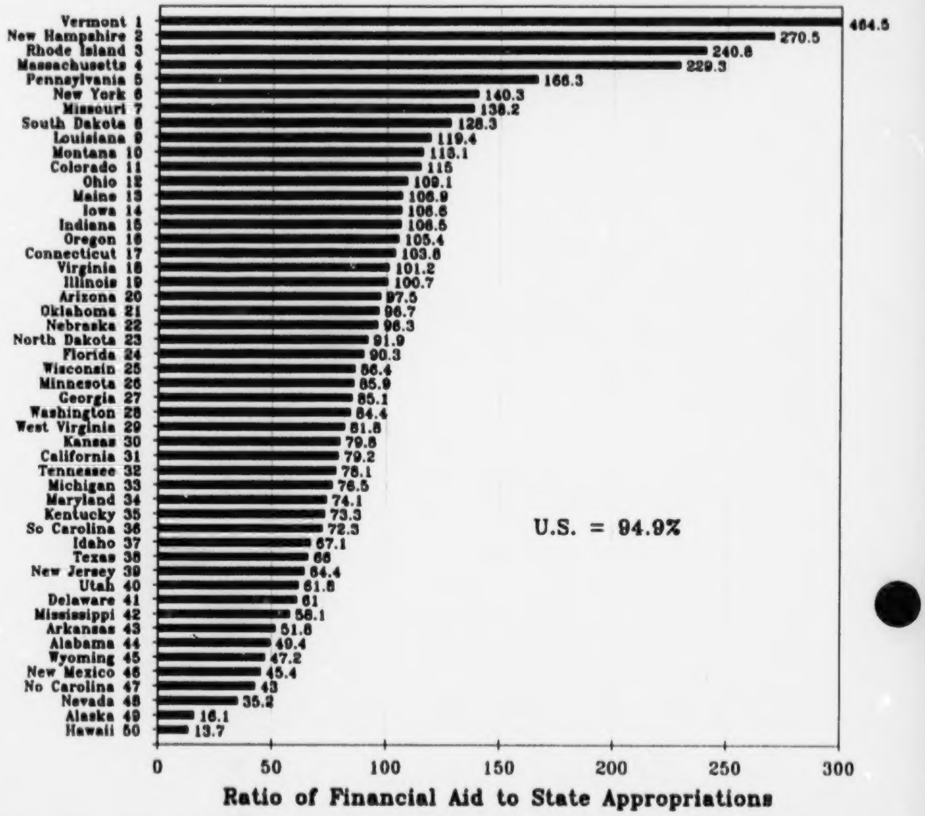
h. National Association of State Student Grant Aid Programs, 26th Annual Survey, 1994-95, pg. 2. For state data; local government from IPEDS

i. U. S. Department of Education, IPEDS 1993-94 Finance Survey

In 1994-95 about 15 million students received nearly $41 billion in federal, state, institutional and privately funded financial aid to help pay their college attendance costs. This aid came in the form of repayable loans, grants, scholarships and income from work-study employment.

Beyond the aggregation of these data is another story, however, and that is that financial aid plays an extraordinarily wide range of roles across the states in assisting students to finance their postsecondary educations. In amount, source and form student financial aid ranges from the trivial to the almost exclusive form of assistance paid to help students pursue their educational objectives.

Financial aid is the partnership between states, the federal government and students and their families in financing higher education. During the era when states in particular have been retreating from their historic commitments to financing higher education, understanding the partnerships at the state level is more important than ever.



Financial Aid as a Percent of State Tax Fund Appropriations
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